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HANDBOOK ON HEALTH
AND HOW TO KEEP IT

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HEALTH
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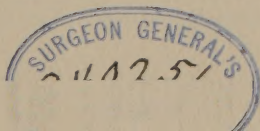
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PREFACE

The enormous demand from men and women the country over for a simple, reasonable and practical system of preserving physical fitness in these times while earning a living or attending to the necessary duties of life has led to the publication of this book. The two books written upon the general results of some three years' work with men of all ages in branches of the service, taken in connection with various magazine articles, has brought upon me a volume of inquiries to which it has been impossible to reply by correspondence.

To plunge at once into the subject, every man and woman has certain definite duties that cannot be shirked. Hence we may not lay out a program that takes the time that must be given to those duties.

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A man must earn his living. If he had a perpetual vacation he might not be obliged to think much about the detail of his health. But he is a worker in a world of workers.

A man must support his wife and family; he must meet certain civic obligations which take time and energy; he must bring up and educate his children; so we must start with the premise that the time we ask him to devote specifically to exercise must be just as limited as possible to accomplish the results.

This book is divided into certain main parts. The first deals with the simplest, shortest, least exhausting and most exhilarating form of calisthenics, or set-up exercises, that can be devised to meet the present conditions of life and civilization. All superfluous movements are thrown into the discard, combinations are effected in order to save time, and finally the result is a system that occupies but about seven or eight minutes and in which the results desired can be

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attained. The balance of the book is devoted to practical suggestions as to value of certain sports at proper periods of life, and also a number of cautions as to the general health, the follies of some habits, and the things that should be considered for the benefit of the younger generation.

If you are sick go to your doctor, but every man or woman, if he or she will but help that good old mother Nature in the simplest ways, can be well and can keep well; and this book attempts to tell in plain, everyday language some of the cardinal principles of taking care of oneself. It is only necessary to spend five or ten minutes daily in muscle-stretching exercises that will neither tire nor bore you, combined with all the reasonable out-of-door play of any kind you like, and can afford. The book also reiterates some of the things that each one knows are silly mistakes, but which are continually repeated. Finally this book appeals to you

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to treat children and youth fairly—not to thrust down their throats the middle-aged man's or woman's tenets of life. Do not forget that a child or a youth likes games which would bore or injure the middle-aged. This book gives some of the reasons for this advice. It is not preaching, just a narration of facts which may help one to appreciate that sage statement of some Englishman who once wrote, "It is a fearful responsibility to be young, and none can bear it like their elders." To conclude—you can be well and strong, and health makes for happiness. Your children and those under your authority can grow up well and strong, and the result will make for their happiness and yours.

INTRODUCTION

When a social scientist said fifty years ago that the greatest nation of the future would be the one which could send the most men to the top of the Matterhorn, he had but a faint idea of how the recent years would prove the justification of his contention. We have learned that not art nor literature, not culture nor learning, not mental attainment nor high morality can take the place of physical efficiency in the time of a world cataclysm. We have learned that a Nation may call its young men and find them too few, that it may take its mature men and still find not enough, that it may need to call into the lists of fighting men those of middle or even past middle life. And so the lesson has been brought home to us as nothing but a world war could bring it.

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We know that physical efficiency is equally valuable in the times of peace, but we have done little until now to show that we knew this. Unfortunately or fortunately, whichever it be, might has gone far to make right ever since the days of the cave man, and it therefore behooves man to see that as far as possible he and his children, his family and his circle, his town and his state are able to stand up for their rights. A Serbian said in a parliament of Nations, when asked what a Nation was, that it was a body of people with common laws, language, literature, art and enough self-consciousness to maintain them. A race cannot stay a virile race without that self-consciousness that realizes the necessity for physical efficiency and the courage and self-respect that accompanies it. But there is another side to this and one with which this book especially deals. Happiness and comfort are largely dependent upon

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good health. If we lack that our own lives are blighted and in addition we render the lives of our friends and family a succession of worries and anxiety.

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PART I

PROBLEMS OF YOUTH AND AGE

I

PROBLEMS OF YOUTH AND AGE

*"Oh! the vigor with which the air is rife,
The spirit of joyous motion,
The fever, the fullness of animal life
Can be drain'd from no earthly potion!
The lungs with the living gas grow light,
And the limbs feel the strength of ten,
While the chest expands with its madd'ning might,
God's Glorious Oxygen!"*

THESE are the words of Adams Lindsay Gordon, many years ago one of Great Britain's most gifted young writers, whose love for the out-of-doors appeared in every line he wrote. It is true that at the time that the above verse was penned there were no motor cars, but there was the same sunshine, the same oxygen, the same exhilaration in the air and the same spirit of joyous motion which he painted so well.

To-day our opportunities for all this have been increased a hundredfold, and the beauties of nature are spread out before us in such a tempting manner that it seems as if

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there could be no one foolish enough not to take his enjoyment of them to the full. And yet in spite of all this there are hundreds of thousands who on account of the other things that come with civilization, the rapid pace in business, the attractiveness of some forms of pleasure which do not take in Nature's best resources, instead of improving the opportunities drift into physical deterioration and forget that after all there must be compensation, and that the man or woman who ignores the life-giving fresh air, the necessity of physical exercise, must pay the penalties which Nature exacts for heedlessness of all her laws. These are the people who in middle life or even earlier find themselves loaded down with physical imperfections or diseases that eventually take all the sunshine out of life.

The great World War and the disclosures which our draft made relative to the physical condition of our people have led inevitably and quite properly to a far more careful study of this subject than would have come in a generation under other conditions. We are certainly all much interested in the effect that civilization and its comforts have

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upon the physique and general good health of a people. We realize that we have drifted far from the habits of primitive man. It is undoubtedly true that Nature meant us to earn our bread by the sweat of our brows and that she will exact some penalty, or force us to make some compensation just as far as we depart from that basic principle. We must, therefore, in some measure make up. Every pressure is unfortunately along the other way. It is so much easier to ride than walk, so much quicker, and apparently it is so much more attractive to earn a daily living by the use of the brain than of the muscles that the temptation is all along the wrong way. Some have tried to frighten us into the belief that because we are using the motor car our legs in the course of a few generations will become useless members and Nature will drop them off. But here comes in a fact that we have discovered in the last few years, namely, that no matter how sedentary a life a man leads, his legs and arms get considerable exercise, in fact more than other portions of his body.

A study of this matter of physical exercise has within the last few years demonstrated

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that the old ideas of calisthenics, mostly along the old Swedish formula which very largely exercised the arms and legs, were really a bore and for the most part unnecessary, so that boys and girls, men and women were more or less justified in disliking those calisthenics and shirking them all they could. Most men have at times taken up what were called "set-up" exercises and have abandoned them because they tired them out, bored them or apparently only tended to develop the parts of the body that were already good enough. Bolin, the great authority on Swedish exercises, frankly stated at the end of a long experience that calisthenics for legs and arms were practically unnecessary. Take the case, for instance, of the motorist; we find much that is of interest, and we find that particularly the man who drives his own car secures a very fair amount of all-around exercise from that very thing. Speaking of earning bread by the sweat of the brow, probably the average motorist when he is putting on a tire or is working on his car expends enough in perspiration to earn a good square meal.

If the trunk gets enough exercise, is ren-

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dered supple, and the lungs, heart and stomach given freedom by a good chest, a man or woman is usually in good health.

As one scientist puts it: "The principle of suitable selection of exercise is of prime importance to the individual. An immense number of possible movements, either because of their direct injuriousness or because of the lack of direct usefulness, must be weeded out.

"We should go slow and not encourage exercises tending to develop abnormal volume and strength of muscle. Unnecessarily large muscles sap the energy of the individual. They direct to themselves an undue share of the nutriment, leaving less to carry on the functions of other organs.

"Exercise for the men we have to consider is, therefore, primarily for the hygienic purpose of creating correct habits of posture and movement in order that vigor may be maintained at the highest possible level, and of preventing the evils of any one-sided activity or too great confinement in a sitting position.

"Among these exercises may well be classified those that supple the trunk, bending and

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inclining the body sideways and twisting. At the same time that they strengthen the abdomen they are most important in maintaining and increasing the mobility of the thorax. Then certain breathing exercises for the enlargement of the chest cause the ascent of the abdominal viscera by an increase in the thoracic aspiration, and, the ribs being lifted, the abdominal wall itself is made to serve in its natural rôle as a support for the viscera, but it needs also strengthening."

We also secure a permanent enlargement of the thoracic cage, for the motorist sometimes acquires a stooping position.

One of the chief attributes of the sportsman has always been a willingness to "pay the price." He will patiently work to acquire perfection of skill. He will make sacrifices in order to come to the fullness of his possibilities in any contest in which he enters. Why, then, should the average man not be ready to pay the ten minutes a day necessary to put him in good condition for that greater game—the game of life?

The set of exercises, given below, are to be practiced, not to see how far one can go,

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but only as far as is perfectly comfortable. Greater suppleness will come without effort.

EXERCISES ANSWERING THESE REQUIREMENTS

First Exercise: The "Grind"—Raise arms sideways to horizontal position: turn the palms upward and force the arms back as far as possible; while in this position, count slowly from one to ten, and at each count describe a complete circle about 12 inches in diameter, the arms remaining stiff, and pivoting from the shoulders. Then reverse the direction of the circle, and do another ten of them.

Second Exercise: The "Crawl"—Raise arms as before to horizontal. Turn the left palm upward; then raise the left arm and lower the right, until the right is down close to the side, and the left is straight up overhead. Then slowly bend the body sideways from the waist, the right arm slipping down the right leg to below the knee, and the left arm bending in half a circle downward over the head, until the fingers touch the right ear. Return to original position, and go down the other way, the left arm slipping along

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the left leg, the right arm bending downward in half a circle over the left ear. Do this five times.

Third Exercise: The "Weave"—(A)—Move the right foot sideways until the heels are 12 inches apart. Raise arms to horizontal and turn the body to the left from the hips, the arms remaining horizontal until the face is to the left, the right arm pointing straight forward, and the left arm straight backward.

(B)—While in this position, bend the body from the waist, so that the right arm goes down until the right fingers touch the floor midway between the feet (or as near to the floor as is comfortable), and the left arm goes up. The right knee must be slightly or even freely bent to accomplish this. Reverse the movement, moving the left foot until the heels are 12 inches apart, and turning the body to the right this time until the left hand points straight forward, then bending downward until the fingers of the left hand touch the floor. Return each time to the original position, body erect, arms horizontal. After you have mastered the exer-

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cise, you can go through it (A and B) and in one continuous motion.

Repeat the whole (A and B), first to the right, then to the left, ten times.

Fourth Exercise: The "Crouch"—Move the right foot until the heels are about 12 inches apart. Raise arms to horizontal. Bend the knees and, with the weight on the toes, lower the body almost to the heels, keeping the trunk as nearly erect as possible. Do this five times.

HOW TO PREVENT BREAKDOWNS

Do you want to work harder than you have been working? Are you afraid that you will break down if you "speed up"? Like everybody else, you have been under a strain because of the war. But now that peace has come the strain is not letting up. Are you physically fit to meet it? You can be, provided you have no organic disease, and will give half an hour a day to the purpose.

When we tackled the job of war, the man that was physically fit for that job was a rare exception. Nearly one in three of the men between twenty-one and thirty-one who were

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examined by draft boards were rejected. If the war had continued, so that the men over thirty-one would have come up for examination, the proportion would have been still greater. But it was not only the young men who had to shoulder the burden of war work. Think of the middle-aged and even elderly men in Washington and all over the country who were called on to work harder than ever before. And most of them were as physically unfit for it as the hemp rope is to stand the strain of a steel cable. But scores of these men did stand the strain. And *you* can stand the one you have to face if you will do what they did.

When we talk of "middle-aged" men we think of those over forty. But physically a man passes his zenith between thirty-one and thirty-five. He has compensations; he knows more and he can get bigger results with a smaller effort. But physically he is at the top of the ladder. And most men begin to slip back, so far as physical condition is concerned, from that time.

That is not necessary. Every man, from eighteen to seventy, should become and remain physically fit. I don't mean that he

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should have huge biceps and great knots of muscles. I mean that he should be supple and enduring, quick and easy of movement, with strong heart, strong lungs and swift co-ordination. I mean that he should be a man who can stand the strain of business and also, if necessary, stand the occasional *over-strain* without bad effects.

At the beginning of the war a group of men in New Haven found themselves face to face with great responsibilities. Some of them, manufacturers, had taken over huge contracts for the Government; others, professional and business men, became engaged in patriotic labors of various kinds. The demand on the manufacturers, and on the others as well, was that they speed up, and speeding up means late hours and nerve tension.

"We'll break down," they said.

"Give up three hours a week," I replied, "and you won't."

They gave three hours a week, and they didn't break down; not a man of them. Not only that, but in spite of the strain put upon them, their health, and consequently their capacity for work, increased. They had to

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do what they had done in ordinary times, only more of it. The test upon them was the test of ordinary times increased fifty per cent.

Later, in Washington, the heads of Government departments faced the same fear of a breakdown that I had found among the business men of New Haven. Before these men were piled up mountains of official work; sometimes committee meetings held them from nine in the morning to twelve at night; and, as usual in Washington, the summer heat was intense.

"We'll break down," they said.

"Give me four hours a week, and you won't," I told them.

Among those who enrolled for the exercises that were to keep them fit were the First Assistant Postmaster General; the Secretary of the Interior; the Secretary of the Treasury; the Attorney-General; the Assistant Secretary of the Navy; and the Comptroller of the Currency.

After a few months of grueling office work in the enervating heat and under the strain of great responsibility, one of them wrote to me, "The first of September finds

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me physically more fit than I was the first of July." Another one said, "My only regret is that in these war times of scarcity of food my appetite has increased almost in the same ratio as the cost of living." And still another declared, "The paunches are contracting, the smiles of good health expanding, all along the line."

The interesting thing in this for the average person is that these men did nothing to keep themselves fit which all of us cannot do, and do every day—ten minutes of setting-up exercise, a short walk, and a rub-down before breakfast. As for the walk, it can be taken at any time of the day; and the rub-down is not essential. The exercises were, I believe, the essential thing.

THE DIFFICULTY WITH SET-UP EXERCISES

Perhaps many of you will say at once that you, too, have taken setting-up exercises, and got no such results. Almost every man has, at one time or another, tried some form of exercise. Some go at it spasmodically all through life, and quit each time with the feeling that they are shirkers. Others give them

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up in disgust after one trial and say there's nothing to them.

There is comfort for both classes. The chances are you did not give up because you were a shirker; and the chances are also that there was nothing beneficial in the exercise you took. There is a right and a wrong way of exercising, and it makes all the difference in the world which way you take.

In the matter of exercise we as a nation started wrong, in our schools, in our gymnasiums, in our special forms of set-up. We started with the wrong theory. We let ourselves be deluded into thinking that the physically fit man is the man with the bulging muscle. We have admired the proportions of our strong men, and tried to be like them, thinking that the nearer we approached that ideal the more physically fit we would be.

Some scientifically trained leaders of athletics have known better all the time; but it took the war to bring it home to most of us. The muscle-heavy man cannot stand the strain of war as well as another man, which means that he cannot stand the strain of peace as well. Why? Because his heart has paid the price for his muscles. The mus-

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cular giant and the physically fit man are not the same.

Some of the exercises we have been taking, under the delusion that they were making us fit, are harmful; some are absurd; here's one that is both: Some time ago a man came to consult me. He had strained his back, and was wearing a leather brace. I stood up before him and started to go through the movement of bending forward at the waist touching the floor with my fingers. When I was half way down he cried out, "Stop! It hurts me." Of course it hurt him. It was that very same exercise that had given him his injury. The movement is absolutely contrary to Nature. No man is ever called upon in ordinary life to do it. If he has to pick up something off the floor, Nature has given him knees to bend in getting down to it.

This is only one illustration of the wrong kind of exercise. As for the others, such as rising on the toes a hundred times, and swelling out the biceps by bringing the clenched fists tensely against the shoulders, all they are good for is to pack on muscle; and they pack it on where muscle is not needed by the average man. Ordinarily a man's arms

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and legs are strong enough. They suit themselves automatically to his profession. If he's a lumberman or a blacksmith he will have big arm muscles; his work will develop them. If he is not he doesn't need them.

It is what lies *under* the ribs rather than what lies *over* them that is of value. The real essential is the engine, the part under the hood—lungs, heart, trunk. The engine should be kept oiled, if it is to run smoothly and climb the hill. And the right kind of exercise is the lubricant.

STIFFNESS AND SAGGING

The first sign of age is stiffness; I might even say that a man is as old as he is stiff; and the muscles of the trunk, which are the essential, the vital muscles, are the first to grow stiff unless they are exercised. Watch a man get up from his chair. If he catches hold of the arm of the chair and helps himself up, he is already growing stiff in the body. He is following the course of least resistance; he is helping himself up with his arm muscles. Now the chances are that these muscles do not need exercising, that they are strong enough for anything he may

need them for. Yet he goes on employing them, while the muscles of the trunk, which are the vital muscles, and which need the exercise of helping him get up, are not called upon.

The result of this neglect is soon apparent. The man grows shorter as he grows older, because he stoops forward; and he stoops forward because the muscles of his trunk are not strong enough to hold him erect. Consequently he sags: the sagging compresses chest and stomach; indigestion results with all its consequences. The man is old before his time. He may be a farmer or a laboring man with powerful arm and leg muscles. In fact, this type of man frequently goes down first, as we all know. What he needs is a trunk so strengthened, a chest so expanded, that he will, without effort, hold himself erect.

I say without effort, because we cannot be thinking all the time of our physical well-being. In fact, that is a pretty good way to *avoid* having physical well-being. Probably you have been told to stand every morning in front of an open window, take deep breaths, and then to remember all through the day to

continue them. That's all right as long as you are standing in front of the window. But when you get to your desk you forget the deep breaths you had intended to take. You cannot think of business and deep breathing at the same time, and do justice to both.

REAL PURPOSE OF SETTING-UP EXERCISES

Consequently any system of setting-up exercise that is to be of real benefit must so strengthen and make supple the vital muscles, the muscles of the trunk, that the man taking them will, after a while, stand erect habitually, and because his chest is permanently deepened, take full breaths unconsciously. These exercises must make him hold his head erect; because when his head droops forward he is beginning to sag. Hollows in the back of the neck are a bad sign, because they mean that this sagging process has begun. A system of set-ups, to be of benefit, must be based on a realization of these fundamental facts.

The system given further on is the system that was used by the manufacturers of New Haven, and by the department heads

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at Washington. In both these cases, however, a leader stood before the class and regulated and timed the movements. For ease in remembering, the twelve exercises are divided into four groups of three each and are named: The first group, Hands, Hips, Head; the second, Grind, Grate, Grasp; the third, Crawl, Curl, Crouch; the fourth, Wave, Weave, Wing. The leader calls out these signals, then counts, one, two, three, four. But in the adaptation to the individual which follows, the names of the groups are omitted, as are the counts. The essential thing is to go slowly.

In adopting it as your own, if you do so, you must not think that, because you take these exercises, you must give up your tennis or your golf. You can and ought to do both, if you have the time and opportunity. I know, however, that many men have not the time and opportunity for sports. But such men can take a walk each day in the open air, a walk of a mile or two, either to or from business.

Also, if you have put flesh on you must not expect to get rid of it in a twinkling. If you did, your heart would pay the penalty.

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Nature did not put on that flesh in a few days. And she will not stand for having it taken off in a few days. The man who breathes deeply does not become fat. He gets enough oxygen to burn up the waste materials. But merely taking an occasional deep breath when he happens to think of it won't do him much good. It must be an habitual thing. And the only way to make it habitual is permanently to lift up his thoracic cage, or the cage of the chest, and make use of the diaphragm walls of the chest. Then he will automatically breathe as he should. And the way to do this is to take the proper kind of exercise.

THE MAN WHO HADN'T TIME

Men need a something that means the same at forty-five or fifty that it had meant when they were twenty, but in different form. It means a course of training or else some of them will "go fine" from overwork and some of them would be useless from no work.

The *Wall Street Journal* told a little story the other day. A Western railroad president of unusual ability and energy settled his

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earthly accounts a few weeks ago. The dispatch said: "Railroad men in the West felt a great loss and Eastern financiers saw a vacant chair that could not be readily filled." A year ago a friend had said to him, "You are overworking. Let me introduce you to my doctor." And the doctor said, "Your vitality is undermined. I see it in your face. Your brain has overtaxed your body. Take a vacation immediately."

The railroad man replied that he had no time to rest. Some months later his friend found him in bed, but he said, "I shall be up in a week. Your doctor was right, but I cannot rest. My salary is fifty thousand dollars and I have just received a bonus of fifty thousand. One cannot accept this remuneration without assuming the responsibilities that go with it."

His friend urged him once more on the basis of his value to the road, but the railroad president replied, "I shall be out in a week. I must be on the job. Responsibilities will not let me leave at this time. Later I can rest."

Later he did rest. He rested forever!

Now our chief executives throughout the

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country are to-day on edge from work, and if an additional burden in their affairs, caused by the general unrest, is to be put upon them on top of what they have been going through in the last two years, whether their line be manufacturing, railroading, finance, or problems of communication, they must take precautions to keep physically fit.

If any one of these men says that he is too busy for it, let him read the above story, and ask himself of what value he is going to be to his organization, to himself, or to his family when a greater power than his business or his government gives orders for his final rest.

And in addition to this, he must not forego his golf or other pleasure on Saturday. There is no effective result from a man of fifty trying to do more work than he can stand. He may think there is no limit to his endurance, physical and mental, but by acting upon that supposition, he is giving just as silly an exhibition as would a college athlete in endeavoring to run a railroad. He must translate his enthusiasm into effective results, and those results must be continued over a considerable period of time. In other words,

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he must train himself to the pitch of what his powers can safely stand, and must take enough training and relaxation to keep fit.

There are very few men nowadays who deliberately say at fifty that physical training and outdoor relaxation are not essential to the maximum of efficiency. Some of them practice what they preach but a great many of them to-day, under the increased strain and the ever-growing demands upon the powers of the executives, in their own individual cases, say that they cannot give their attention to this. If they do not, then Nature will surely exact the penalty in suffering and incapacity.

THE STRONG SURVIVE

War has crucified creeds, flouted philosophies and laughed at all laws save one, namely: The strong survive. The scepter of olden times shifted from the weak to the strong. The old Greeks fought off the torpor of weakness for centuries only to succumb when their luxuries had enervated them. Rome faded as a world power when the Roman forgot to fight and began to hire his fighters. Spain, mistress of the seas, be-

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came effeminate and gave over her primacy to the island race of Great Britain. If we may believe the critics of a decade ago, this Island Race was beginning to slip when the World War aroused them barely in time.

Riches do not make a race, and machines alone will not win a war. The issue always comes down to the fighting qualities of the people. Courage and stamina become the great asset, and neither of these is purchasable at a moment's notice. They must be in the Nation, bred in and cultivated by competitive soul-engrossing contests. And if we ever forget this, another people will push us off the boards and take over our heritage.

TRAINING

Every parent is familiar with the word "training" on the lips of his son in school and college. Training means to the boy the giving up of certain things like smoking and pastry, late hours and any dissipation, the taking of special exercise devoted to making himself fit for the game or contest into which he proposes to enter, in team games especially, and the slow but general progress towards the ability to do certain acts more

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and more continuously and more and more perfectly. It means the fitting of body and mind for a big struggle in which the season culminates. But after all, in every sense it is a matter of preparation for a certain work to be done every day, and also the provision for a certain reserve of power to be exerted when a special occasion demands. However, men forget that life is a succession of these contests and that a man should be trained for them. But in life there comes very little of the period of relaxation that follows training in school or college sports. The training, therefore, means making oneself fit for the daily task and at the same time storing up resistive force and vitality for the occasional greater strain which may come at any time. We are all familiar with the conditions of overtraining, making men grow stale through too much work, and the same principle applies to the daily routine of life. In life we must spread our training more gradually and avoid even more carefully going stale. We must follow Nature's program and provide in youth more vigorous exercises, a stiffer training as it were, and then gradually moderate that to suit the constantly increas-

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ing years. Nature will stand for an occasional overdraft on the energies, but at no time in life is it wise to make that overdraft continuous. The youth training for a team will go stale if it is made continuous, and the man in business life will find the same is true. The modern idea which we have now reached is to keep well within the powers, but to do as Nature does, plan slowly and deliberately and according to growth and age. That is the secret of training at any age.

PHYSICAL CONDITION OF OUR PEOPLE

What do we know about the physical condition of our people? We have had an exact measure of the men of the country between the ages of 21 and 30. Over a third of these were rejected in the first draft. Some of these were for under-height and special defects which did not prove anything about the general physical efficiency, but 25 per cent were rejected for reasons that indicated directly physical unfitness. Census statistics show that there are approximately 25,000,000 boys and girls in this country from 6 to 18 years of age. There have been investigations relative to these

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ages, but not, of course, as definite as those between 21 and 30. But such investigations as have been made show that 50 per cent of these have some defects or ailments that show physical unfitness. We know positively that it is from this class of children of 6 to 18 years that our real man and woman power must come. We know that the physical up-building of women is just as important as that of men. We know that children in industry from 14 to 18 need especially this attention. But there is no reason why this should preclude in any way an attempt to rebuild the men from 21 to 30, and it is of equal importance to keep in physical condition men and women who are over those ages. The early detection and correction of remediable defects should have the greatest and most careful attention, beginning at as early an age as is possible. We can accomplish this through the medium of exercises for all children of school age and we can apply corrective work for special defects at periods still later. It is never too early to train in health habits, and to give certain facts regarding health knowledge. Our former difficulty has been that these have been

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too sporadic and especially have been too learned, if one may so term them, in that they have not been couched in such simple language and put in such concise terms as shall make an impression upon the individual. In youth, the desire is not for health, *per se*. In fact, that is the last thing the boy and girl think of. It is for power in a different form from that which appeals to mature life. The boy of fifteen is not looking for money or intellectual strength. To him physical prowess means the same that money and power mean to the mature man. The girl at fifteen is not looking for these things but for grace and attractiveness. Hence the appeal must be along the lines which will promise in some form results of this nature. And the only way to approach it is upon a basis that will show a boy real results in physical prowess and the girl greater grace and attractiveness.

DIVISION OF EXERCISE ACCORDING TO AGE

One of the most important things to consider in the matter of exercise and play is the matter of age. The writer has several

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times suggested that with the average man, tennis should be indulged in up to the forties. After that, it is wise to shift to golf.

But, to begin at the beginning, as a child, and even up to kindergarten age, special definite exercises, such as are sometimes contemplated, are probably of no very special value. Nature causes a child to exercise pretty much all of the muscles of its body and if the child has fresh air, good food and its nervous system is not stimulated by attention, the progress is probably as satisfactory as could be wished. When the child gets old enough to go to school and up to the age of twelve, some more definite exercise may be taken, but the results should be acquired mostly from playing games out of doors. It is well to pay some attention to the poise and carriage, but this can be done by exercising a very few minutes at a time, a sort of stretching period between studies. When we come to the age of 12, then matters take on a new aspect. Sport, play and recreation, fresh air and cleanliness are the first requisites, but from the earlier days already mentioned and perhaps with more purpose now, faults of carriage and particularly the shut-

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ting up of the chest must be attended to, and these require something more than hit-or-miss attempts. A boy or girl can play games, tennis, baseball, in fact almost all our sports and still be round-shouldered, stooped and with a carriage which will surely tell adversely in the long run. That is why it is necessary to take up this matter and to see that more definite plans are made for the proper exercise for our school children. Nor does this mean anything like the old form of gymnastic and setting-up drill which was such a bore and which, judging from our records when we came to the draft, had very little effect upon those who were forced to go through them. We must have something short and effective; something that recognizes that the boy and girl will use their arms and legs aplenty in sports and games, if permitted to do so, and will get the requisite exercise for the heart in a similar fashion. But they may not improve their carriage or the main muscles of the back and trunk. They may become and stay round-shouldered, with a weak neck and drooping head and yet indulge in the games. Here is where we must take

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up the matter and take it up in a common sense way and put it through.

REASON FOR DEVISING SPECIAL FORM OF SET-UP EXERCISES

Recently, by the World War, we have been rudely awakened to the fact that in many cases it required a quota of 2,000 draft men to secure 200 for the service. What does this mean in the case of the youth of this country? Our system of setting-up exercises, if it can be truthfully said that we ever had a system, was as antique as were some of our boats and aeroplanes four years ago. It has been proven in numerous cases that any man's or youth's endurance, vitality and resistive powers can be increased immensely at the expenditure of even so small a time as ten minutes a day in a really modern form of muscle-stretching exercise. This saving of time has been accomplished by the elimination of waste effort, and in doing so seems to have exploded the theory that big muscles or ability to do special athletic stunts have any particular value. As a rule, thanks to our sports and games for youth, a boy's or a man's legs and arms are usually good

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enough for his calling, whatever it may be, and after all, what is of the most vital importance with man, as with a motor car, is the "engine"; that is, the part that is "under the hood." In other words, that his heart, lungs, and trunk are what count. Given true power there and true suppleness, we find that the efficiency and ability to stand work—hard work—mentally and physically, is enormously increased. Physical fitness is possible and practicable for the boy and for the man and we need not have, if we begin at the root of the matter and follow out a successful program, anything like the wholesale rejection of men from 21 to 31 or the premature breakdown of men of 50.

Such a system was used in many Naval Stations and Aviation Fields and has been adopted and kept in force in many of our schools who make it a daily feature of the work, so that when these boys reach the age of 21 they shall be better specimens of physical manhood and more representative of what the youth of this Nation ought to be. We have spent millions of dollars, and quite wisely, in the development of vegetable and animal life. Meantime, we have allowed the

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very essence of the strength of our Nation, its man power, to go prodigally to waste. We have relied upon sports and games, most admirable in themselves, to take care of the greater portion of our physical development. We have seen our youth, coming out of school or college, practically abandon all their athletics at 21 or earlier for the pursuit of the dollar.

We have let foreign leaders with fads and fashions fill us with the thought that a huge biceps, or great knots of muscle are the goal toward which we are to strive through daily struggles. Almost all of us at one time or another, as boys or even men, in certain admiration of these Sandow proportions, endeavored to become like these pictures. Many of us listened to the tale of how, if we breathed deeply so many times a day, forced our lungs full, we should acquire the habit, and when sitting in our office chairs would continue unconsciously this same deep breathing. But we all eventually learned that this was quite untrue and that those deep inhalations, while excellent at the time, speedily ceased when, at our desks, we busied our brains with the work of the day.

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Now our visions have subsided. We no longer aspire to be Sandows. We understand a little more the theories of the trainers of athletes, that it isn't the big-muscled man they are looking for, that it isn't the great lifter of weight, that it isn't the muscle-bound giant or the gymnasium-fad youth, but it is the supple, the enduring, the facile and dexterous man with good heart, good lungs, and quick coördination. It is the man who can do the work of the day and do it every day that we are looking for.

The golden opportunity, when we are aroused and see clearly what we need, should be utilized to take the necessary steps to supply that want, to build up physically sound men for the service of the Nation and by daily small doses, coupled with the free dissemination of all our sports and games, keep our youth fit and well.

ATHLETIC SPORTS ESSENTIAL BUT NOT ENOUGH

Our athletic sports have produced the right spirit, for the rush of all these athletes to the service has shown this. But our

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calisthenics, our general building-up exercises, have failed entirely in the building up of our youth. They are antique. These Swedish or other imported methods have been useless. Why? Because of shirking or slacking, or because they did not appeal to us as an eager, hustling Nation, to whom time was of the greatest importance? It is because we have never had it forced home upon us as it is in these days of emergency, these days when men or time are at a premium. Permit me to illustrate: Only recently Professor Bolin, the authority on Swedish exercises, died and left behind him the record that after 25 years of study he had decided that setting-up exercises were unnecessary in the case of a man's legs or arms or pectoral muscles, but that the attention should be devoted to the trunk, that is, to the engine itself. We have wasted time or we have taught slacking, because a boy will shirk what he does not need, and when a boy learns to shirk it is a bad business.

There is thus a new idea of considerable importance relative to calisthenics and it is spreading.

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NECESSITY FOR TAKING ADVANTAGE OF PRESENT CONDITIONS

If a man thought he had one hundred thousand dollars in the bank and then found upon trying to draw upon it that his balance was only seventy thousand, he would feel that some examination was necessary. Let us face things as they are. We found a rejection of thirty per cent of our men under the draft, and that certainly should be enough to cause us to make a pretty careful examination into the reasons. Such physical education as we had must be revised. Those who advocate still continuing the foreign systems which we have been teaching our physical leaders in the last fifty years, pretty generally admit now that some kind of a change is necessary. If this is so, why not take advantage of the cumulative wisdom of those already and later quoted who have made a scientific study into the matter and couple this with the practical side, illustrated with thousands of groups in service and civilian life, which means that we should save all the time possible and get results, and then make a real effort to throw off the yoke of "old-fash-

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ionedness"—going on doing things because they have been done, even though we have found that they have not produced the proper results. In other words, do just what we have done with boats, aeroplanes, guns and everything else. There are plenty who know the utter failure of the present methods and who have recently put their knowledge into print. Take, for instance, Dr. Delano and Dr. Bolin. The former, a practicing physician of large experience who has made a study of this matter, says: "Since muscle gives us the readiest exhibition of energizing, mankind falls into the error of assuming without further examination that muscular contraction is exercise. The *reductio ad absurdum* of the dynamic view of exercise might be illustrated by a man taking a dumb-bell in hand, resting elbow on a table and flexing the forearm on the arm. If he increased the weight and the number of contractions daily, we may be sure that the biceps would respond by increasing in size and power; there would be much work done, as measured by foot-pounds, but what of exercise? From our point of view a negligible

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quantity thereof, in no sense proportionate to the time and effort!"

Of the things we have been doing, "Even more wearing than daily toil, though, must be that sublimated work that men submit themselves to under the name of exercise. Over-strenuosity at the period of growth must necessarily lead to an over-consumption of energy. The result is fatigue but a fatigue to which the mother nervous system contributes the greater part. To make muscle a fetich is folly."

WHERE FORMER METHODS FAILED

When I accepted the appointment to handle the athletic work in the Naval Training Stations, I was just about as much interested in setting-up exercises or calisthenics as the average athlete or football coach. I need hardly say that that means practically not at all interested, for men who have had the practical side of these athletic sports in charge have never, so far as I could see, regarded these calisthenic operations with any degree of interest or seriousness. This is in no way reflecting upon them, but it is a mere statement of a fact which every one in ath-

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letics knows. The so-called "gym" work has never particularly interested the "outdoor" man, and, after all, the training and physical development of our men in service, as well as outside, is one which is being largely handled by men who work along the outdoor principle rather than the indoor one. Physical measurements and strength tests have never impressed the coach or trainer. I give this explanation in order to show that so far as the calisthenic work is concerned it was forced upon my attention rather than invited by me.

In visiting the various stations it was inevitable that I should see these calisthenic performances and begin to measure them up as an adjunct to the physical condition of the men in which I was really very vitally interested. The first thing that I noticed was that each station, and in fact each leader had a different view or a different method. I then began a study of these exercises and soon found a reason for this. The Swedish, so-called, exercises were the standard, largely introduced and practiced by Germans, and it should be said that they did us a service in introducing any calisthenic exercises. But

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Swedish exercises were like the German language, capable of very extended variety, and each leader seemed to have some special section or group of these upon which he pinned more faith than upon others. Some leaders were very strenuous and used the most strenuous types of the Swedish exercises, even to the extent of men lying flat on the ground and pushing themselves up with their arms, then suddenly clapping the hands without dropping the body to the ground, getting the hands back in position to support the body once more. I noticed very speedily that where the more strenuous forms were used the men were pretty well "tuckered out" at the end of a half an hour of this work, and certainly not in any condition to perform any drills or do any strenuous athletic work with vim and snap. I also saw that when any men were transferred from one station to another that, on account of the lack of standardization, it took them some days to master the work under a new leader who had different views. I also saw that the nomenclature was so extended that it required months to develop a leader. All this began to be interesting but doubly so when I saw

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how many men were slacking the exercises. This I did not note at first as the rhythm of a group is apt to deceive the casual observer. Then, however, I wondered how a man of 190 or 200 pounds could go through these exercises led by a non-commissioned officer of 138 pounds. I at once made a very startling discovery, namely, that none of these heavier men went through the actual operation, but made motions corresponding in a way and hence slacked the work almost altogether. Then I began the study of other men who undoubtedly could have done the work had they wished to do so, and, finally, by putting the camera on these groups of men I found that even with the best of leaders the slacking was very marked. At this same time two commandants of districts, one an Admiral, wrote me, in commenting upon the development of the athletic work, they were going to throw out setting-up exercises altogether because (and note this which came to me at a time when I had made no comment on the setting-up exercises, but had wondered then what the effect would be), "they either taught men to slack or took too much out of them so that they were not fit for

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work for some little time." Now when the commandants of districts who are endeavoring to fit these men for sea duty had reached this conclusion, it seemed to me that it was high time for some one to make a study of these setting-up exercises and find out whether they were as worthless as these commandants believed or whether they could be put in a form that would be of use. There was more than one side to the problem. The first was that possibly the best thing to do would be to throw out these exercises altogether, and just as those of us who have coached and who are interested in general athletics had always done, rely upon the general work of the day to keep the men fit. But in football and all other sports, it has been our habit to do something that might possibly correspond with setting-up exercises in a way of special individual work. Hence, it seemed worth while to consider whether there was not some means of making use of a set of preparatory exercises directed toward the main object in hand, which was the making fit of these men for sea duty. The second consideration was standardization, for that seemed at once to be essential if we were go-

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ing to have setting-up exercises. In other words, it was folly to transfer a thousand men from one station to another and have them learn a new manual. It was equally foolish to gather together men on board a ship, 100 from one station and 100 from another, and then have to begin all over again. Finally, it was absolutely essential that these setting-up exercises, being merely a preparation, should not be so strenuous or so overdone as to defeat the very object, and instead of their making men ready for their daily duties, incapacitate them for an hour or so from thorough performance of those duties. Finally, there is one point on which the athletic coach and the officer in the service agree most heartily, that is, that it is bad business to teach men to slack. When a man gets an order he must perform the job and must not see how easily he can "get by." These considerations led me to a study of the whole problem, and, as was natural, I began to take notice not only of the men in the performance of these setting-up exercises, but of the latest books by scientific experts on this phase of our life; the fact that in the draft nearly a third of the men had been rejected seemed

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to have stimulated scientific investigation along these lines. In reading I then found, confessedly somewhat to my astonishment, that some of these points had struck not only physicians and surgeons, but also those who have been engaged for many years as direct leaders and exponents of this so-called Swedish system. Here are a few of the statements culled from such works:

OPINIONS OF SCIENTIFIC INVESTIGATORS

Many scientific investigators, even those who formerly were advocates of the so-called "Swedish system," have within the last year either written or printed books or articles commenting upon the uselessness of much of it. Here are a few extracts from recent scientific books, either in print or on the presses, or where I have been permitted to see the earlier sheets:

Generally speaking, the necessary muscular strength is gained incidentally, and we need not devise special exercises for the purpose of gaining it.

Especially, may we consider it a superfluous, useless, and even detrimental labor to strengthen the muscles of the arms, the legs, and the pectoral groups. The

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arms and legs are usually sufficiently well developed muscularly to carry on their duties.

Exercise should influence favorably the circulation, and should produce exhilaration and a sense of satisfaction. To make muscle exertion the supreme test of exercise is to overrate muscle. Real exercise is often a specific for fatigue.

"The principle of suitable selection is of prime importance. An immense number of possible movements, either because of their direct injuriousness or because of the lack of direct usefulness, must be weeded out.

"The method of using voluntary antagonistic resistance is contrary to the laws of Nature, inasmuch as it strives, consciously or unconsciously, to make permanent the stage of diffusion, to nurse rigidity of motion which we should, in the interest of economy of energy and grace, do everything possible to counteract and eradicate."

"Man employs his muscles in new ways, in mechanical repetitions of the same act, or in modes of labor which are far removed from those called forth by primitive conditions.

"The danger we have indicated, though as

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yet incipient only, was a determining cause in the downfall of past civilizations.

"Some perception of the evils that we have thus briefly summarized has been awakened in the minds of the more earnest thinkers during the last few years, and, as a result, the systems of exercises display a clearly marked tendency towards modification.

"They have lessened their muscle-tensing violence, and have become, and are becoming, ever less and less strenuous physical acts. Thus we find 'physical-culture' advocates who a few years ago insisted upon the use of dumb-bells, and in some cases dumb-bells increasing in weight over a graduated series of exercises, now emphasizing the necessity for gentle exercises without even mentioning the dumb-bell, which is perhaps as good a proof as any of the truth of my contentions.

"This is a later form of 'physical-culture' development, and is, in effect, a modification in the right direction. It is the logical outcome of the perception that strenuous, forcing, muscular exercises were resulting in new and possibly greater evils than those they professed to cure.

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“One most creditable feature of a system devised by Alexander as seen in practical use is that the individual loses every suggestion of strain. He becomes perfectly ‘lissom’ in body; all strains and tensions disappear, and his body works like an oiled machine. Moreover, his system has a reflex result upon the mind of the patient, and a general condition of buoyancy and freedom, and indeed of gayety of spirit takes the place of the old jaded mental position.”

Here are further criticisms on the course we have been following:

The educational system itself is grievously inadequate and detrimental, as all thinking educationalists are aware, but the decision regarding the necessity for physical exercise and “deep breathing” in our schools has added another evil. I wish to say here deliberately that the many systems of physical training generally adopted show an almost criminal neglect of rational method, and of the test which can demonstrably prove the practice to be unsound and hurtful.

Here is a criticism from an English source:

I will merely point out that in our schools and in the Army human beings are actually being developed

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into deformities by breathing and physical exercises. I have before me a book on the breathing exercises which are used in the Army, and any person reasonably versed in physiology and psychology, and knowing they are inseparable in practice, will at once understand why so much harm results from them. Take either the officers or the men.

In a greater or less degree, unduly hollowed backs (lordosis), stiff necks, rigid thorax, and other physical eccentricities have been cultivated. It is for these reasons that heart troubles, varicose veins, emphysema, and mouth breathing (in exercise) are so much in evidence in the Army.

I stand by every word of this to-day. Hundreds of soldiers every year have to leave the British Army on account of heart trouble directly brought about by the "drill-sergeant's chest" and its concomitant strains and rigidities.

Is it, I would ask, likely on the face of it that the right position in which a man or woman should stand for health's sake should be one needing positive strain to preserve? The thing is preposterous, and I am convinced that nothing can result from the application of such principles but complete chaos, physical and mental.

Miss Frances Jordan, reported in a heading under her signature as "Selected by Government Competition as America's Prettiest Girl," has this to say in her article on Health:

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Stretching is Nature's way to take the kinks out of cramped muscles and the way to gain in height and to aid an erect carriage of the body.

Children and young animals stretch a great deal. It helps them grow. But grown-up folks almost forget the pleasure of stretching, because it is impolite and inconvenient to stretch in public, and because we are often too tired or too hurried to stretch at the natural time, getting up or going to bed.

And Miss Jordan, despite her handicap of being "America's Prettiest Girl," is quite correct.

The discovery of Bolin, after twenty-five years of experience in Swedish Gymnastics, that setting-up exercises were absolutely useless and unnecessary for the legs, arms or pectoral muscles, has been followed by other discoveries which are being borne home to those who taught these or other cumbersome or violent programs. The real value of setting-up exercises comes through the circulatory system, the breathing and the general carriage. They should not be accompanied or characterized by great effort. These intense efforts always fix the chest and this stops the pulmonary circulation. It is not necessary to have a long list of exercises for the purpose of set-up and in fact they

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may be reduced to movements that may be performed in five to ten minutes. They should be largely stretching exercises, breathing exercises and those forms which strengthen the muscles of the neck, shoulders and back, for the purposes of attaining proper poise and carriage. The breathing exercises in this list are not carried to any extreme effort. The lungs are slowly filled and the breath is not held, but expiration follows, and then there is a pause at the end of the expiration just as is natural before the inspiration again begins.

Probably the most foolish wandering away from the methods of Nature has been to regard fat as something which can be taken off at the rate of a half pound a day for sixty days by violent and continued exercises of all kinds. Many have been victims of these attempts, only to find that it required a further devotion and strenuosity to keep that fat from returning in the sedentary life, and furthermore it was necessary every year or two to repeat the dose and the vitality weakened under it. A certain amount of fat is not abnormal with many people and it is a question rather of the muscular walls behind

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it and the general tone of the system, as well as the poise and carriage.

CONCLUSIONS

With all these facts before us it seemed that we ought to be able to answer the commandant who was ready to throw out setting-up exercises altogether, to benefit by the experience of men who had devoted a lifetime to this Swedish exercise and to give some plausible reasons, not only to the physical expert, but to the man who had to take the medicine, namely, the enlisted man, which should make him more willing to spend a short time in something that would really make him physically better for his work. The cardinal points could then be classified.

1st. Setting-up exercises are preparatory, and ought to increase vigor and vitality rather than to exhaust.

2nd. They should occupy just as short a period of time as possible and yet accomplish the results of improved poise, respiration and endurance.

3d. They should be so standardized as to make it possible to interchange men from station to station or from ship to ship with-

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out the necessity of learning a new manual.

4th. They should eliminate, as far as possible, the tendency to slack (a) by making it more apparent to leaders or observers, and (b) making it less tempting because of over strenuousness.

Now most of this is equally true in regard to a form of set-up exercise for the individual man and woman. They must not be exhausting. They must not be continued long enough to become a bore. They should exhilarate and they should supple. They should be like the natural exercises of a stretching character which all animals adopt.

PART II
DAILY DOZEN SET-UP

II

SHORT-HAND SYSTEM OF SETTING-UP EXERCISES

I SHALL give this Daily Dozen Set-up, first, in the form in which it was laid out for officers and leaders in service; secondly, in the form in which it can be used by the individual without a leader, and which makes it applicable to ordinary every-day individual use.

THE DAILY DOZEN SET-UP

A SHORT-HAND SYSTEM OF SETTING-UP EXERCISES

INSTRUCTIONS FOR SERVICE LEADERS

FOR MEN IN SERVICE

Before commencing the DAILY DOZEN SET-UP, the Leader should march the men at quick time for five hundred yards, then face them about and bring them back for two hundred yards on the double-quick, and the remaining three hundred yards at quick time.

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The Daily Dozen Set-up consists of twelve exercises which, for ease in memorizing, are divided into four groups of three exercises each. Each exercise or movement is given a name, and the names of all the movements of a group commence with the same letter, thus:

- I. 1. HANDS
2. HIPS
3. HEAD
- II. 1. GRIND
2. GRATE
3. GRASP
- III. 1. CRAWL
2. CURL
3. CROUCH
- IV. 1. WAVE
2. WEAVE
3. WING

These exercises are not difficult nor exhausting, and do not demand great strength for proper execution, but they are designed, both from a scientific and a practical point of view, to give exactly the right amount of exercise to every muscle of the body. They are intended to promote suppleness and especially to strengthen those muscles which are

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seldom brought into play in ordinary daily life. A conscientious fifteen minutes a day with the Daily Dozen Set-up will soon do more for a man than any amount of skillful physical feats or "strong-man stunts." When one first practices these movements, their effect will be felt on the little-used muscles of the neck, back, and stomach; yet they will not leave the pronounced muscular fatigue which follows the ordinary exercises, and which is of more harm than good.

Any setting-up exercises should be preparatory; that is, make men ready for the serious work of their day, and in no way exhaust any portion of their vitality. This modern "short-hand" method of setting-up leaves men in an exhilarated condition, and, instead of taking anything out of them, prepares the body for any kind of work that is required in the service.

Each exercise starts from the position of Attention:

1. Heels on the same line, and as near each other as the conformation of the man permits.
2. Feet turned out slightly.
3. Knees straight without stiffness.

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4. Body erect on hips, inclined a little forward; shoulders square and falling equally.

5. Arms and hands hanging naturally, backs of the hands outward; thumbs along the seams of the trousers; elbows near the body.

6. Head erect and straight to the front, chin slightly drawn in without constraint, eyes straight to the front.

The Leader takes a position facing the men who should be so placed as to give ample room for unhampered movement.

Each movement should be executed in time with the orders or counting of the Leader which should, with the exception of the Speed Test which is a catch exercise, be slow and measured. These exercises do not depend upon snap for their effect but upon steady, deliberate stretch of the muscles. Any tendency towards hurried, careless execution should be immediately discouraged by the Leader who should, at all times, insist upon uniformity of movement.

In the following instruction, the preparatory commands are in small capitals, thus: ORDER. The commands of execution are in

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italics, thus: *Hands*. Explanation of each movement is given in parentheses.

GROUP I

1. HANDS

HANDS: READY: *cross*.

(At *cross*, arms are extended laterally and horizontally, palms down.)

ORDER: *hands*.

(At *hands*, the arms are brought back to a position of Attention close to the sides. Especial care should be taken to see that whenever, throughout the exercises, this position is taken—as at the completion of each exercise—full control is retained over the arms, and the hands should not be allowed to slap against the sides audibly.)

ORDER: *rest*.

(At *rest*, always return to a position of Attention. In this case there would be no change.)

2. HIPS

HIPS: READY: *cross*.

ORDER: *hips*.

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(At *hips*, the hands are placed on the hips with shoulders, elbows and thumbs well back.)

ORDER: *rest*.

3. HEAD

HEAD: READY: *cross*.

ORDER: *head*.

(At *head*, the hands are placed behind the neck, index-fingertips just touching, and elbows forced back.)

ORDER: *rest*.

The above exercises should be executed but a few times each, being preparatory to the Speed Test.

SPEED TEST

In this, the preparatory command, ORDER, is omitted and the Leader gives the commands, *Head, hips, hands, etc.*, in sharp succession, varying them, and occasionally repeating a command in a manner calculated to catch the unwary napping.

SPEED TEST

SPEED TEST, OMITTING THE WORD "ORDER": *hands, hips, head, etc.*

ORDER: *rest*.

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The length of time devoted to this movement is left to the discretion of the Leader.

GROUP II

I. GRIND

GRIND: READY: *cross*.

PALMS: *turn*.

(At *turn*, the palms are turned up with backs of hands down and arms forced back as far as possible.)

ORDER: *grind* (*one, two, three, four, five to ten*).

(At *grind*, and in time with the Leader's measured counting, circles of twelve inch diameter are described with the finger-tips which move forward and downward, then backward and upward, the arms remaining stiff, and pivoting from the shoulders. On the backward movement of the circle, the arms should be forced back to the limit. A complete circle should be described at each count.)

Reverse (*one to ten*).

(At *reverse*, the same process should

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be gone through, the circles being described in the opposite direction.)

ORDER: *rest*.

Ten circles are described in each direction.

2. GRATE

GRATE: READY: *cross*.

ORDER: *grate (one, two)*.

(At *grate*, and as the Leader counts *one*, the arms are slowly raised, as a deep inhalation is taken, to an angle of 45 degrees from horizontal, and at the same time the heels are raised till the weight of the body rests on the balls of the feet. At *two*, the arms are returned to *cross*, as all air is exhaled, and the heels are lowered to a normal position. Care should be taken to see that the arms are not allowed to drop below the level of the shoulders or rise more than 45 degrees.)

ORDER: *rest*.

The arms should be raised and lowered ten times.

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3. GRASP

GRASP: READY: *cross*.

ORDER: *grasp* (*one, two, three, four; one, two, three, four; one, two*).

(At *grasp*, the position, *head*, is taken. With head up and eyes front, and in time with the Leader's counting, *one, two, three, four*, the body is bent forward from the waist, as far as possible. The body is returned to upright in the same number of counts and at an unusually slow *one* is bent as far back as comfortable from the waist, being returned to upright at *two*. Care should be taken to see that this motion is sustained and not jerky.)

ORDER: *rest*.

The entire movement should be repeated five times.

GROUP III

1. CRAWL

CRAWL: READY: *cross*.

ORDER: *crawl* (*one, two, three, four; one, two, three, four*).

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(At *crawl*, the left palm is turned up and as the Leader counts *one, two, three, four*, the left arm is raised and the right arm lowered laterally until at *four* the right arm should be in a position of *hands*, and the left arm should be extended straight up with the palm to the right. Then, as the Leader counts *one, two, three*, the body is slowly bent side-wise from the waist, the right hand slipping down the right leg to or beyond the knee and the left arm bending in a half circle over the head until the fingers touch the right ear. At *four* the position of *cross* is quickly resumed, and as the Leader commences to count again, the RIGHT palm is turned up and the exercise completed in the opposite direction.)

ORDER: *rest*.

The entire movement should be repeated five times.

2. CURL

CURL: READY: *cross*.

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(In this movement, at *cross*, the feet are spread until the heels are about twelve inches apart. The left foot remains stationary, the right foot being moved to accomplish this.)

ORDER: *curl (one, two, three, four; one, two, three, four; one, two, three, four)*.

(At *curl*, and as the Leader counts *one, two, three, four*, the fists and lower arms are bent DOWN from the elbows which are kept pressed back, and the fists are curled into the armpits. This position should be reached at *three* when the head and SHOULDERS should be forced back very strongly, reaching the limit of motion at *four*. The Leader again counts *one, two, three, four*. At *one* the arms are extended straight forward from the shoulders, palms down. At *two* the arms begin to fall and the body bends forward from the waist, head up and eyes front, until, at *four*, the body has reached the limit of motion and the arms have passed the sides and have been

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forced back and (as the trunk assumes a horizontal position) up as far as possible. This is the *wing* position. For a third time, the Leader counts *one, two, three, four*, as the body is straightened, reaching an upright position with arms straight forward at *three*. *Cross* is resumed at *four*. As the body is straightened from the *wing* position, a full breath should be taken, the lungs being filled to the maximum as *cross* is resumed at the completion of the movement. This breath should be retained during the *curl* movement, and exhaled as the *wing* position is taken. Inhale through the nose.)

ORDER: *rest*.

The entire movement should be repeated five times.

3. CROUCH

'CROUCH: READY: *cross*.

(In this movement, at *cross*, the feet are spread until the heels are about twelve inches apart. The left foot

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remains stationary, the right foot being moved to accomplish this.)

ORDER: *crouch* (*one, two*).

(At *crouch*, the knees are bent and, with the weight on the toes, the body is lowered nearly to the heels, keeping the trunk as nearly erect as possible. This is done at *one* and at *two* the upright position is resumed.)

ORDER: *rest*.

The entire movement should be repeated ten times.

GROUP IV

I. WAVE

WAVE: READY: *cross*.

ORDER: *wave* (*one, two, three, four*).

(At *wave*, the arms are stretched straight above the head, fingers interlaced and arms touching the ears. Then, as the Leader counts *one, two, three, four*, a complete circle, of about twenty-four inches diameter, is described with the hands, the body bending only at the waist. The trunk should be bent as far backward as forward, and as far to one side as

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to the other. The body should be forward at *one*, to the right at *two*, backward at *three*, and to the left at *four*. The motion should be steady and not in jerks.)

Reverse (one, etc.).

(At *reverse*, the same movement should be repeated in the opposite direction, i.e., to the left.)

ORDER: *rest*.

(At ORDER, the body should be brought to an erect position, stretching the arms up as far as possible; and at *rest*, the arms should drop slowly, laterally, to a *hands* position.)

Five circles should be described in each direction.

3. WEAWE

WEAVE: READY: *cross*.

(In this movement, at *cross*, the feet are spread until the heels are about twelve inches apart. The left foot remains stationary, the right foot being moved to accomplish this.)

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ORDER: *weave* (*one, two, three, four; one, two, three, four*).

(At *weave*, and as the Leader counts *one, two, three, four*, the body is turned to the left from the hips, the arms maintaining the same relation to the shoulders as at *cross*, until at *one*, the face is to the left, the right arm pointing straight forward (in relation to the feet) and the left arm straight backward. At *two*, the body is bent from the waist so that the right arm goes down and the left up, until, at *three*, the fingers of the right hand touch the ground midway between the feet. The left arm should then be pointing straight up, with the face still to the left. The right knee must be slightly bent to accomplish this position. At *four*, the position of *cross* is resumed and as the Leader again counts *one, two, three, four*, the same movement is repeated with the left hand touching the ground this time. Throughout the exercise, care should be taken that the arms

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remain in the same straight line, making no separate movement, but changing their position only as the trunk and shoulders are moved and carry the arms along. After this exercise has been thoroughly mastered, the turning and bending movements made on the counts, *one* and *two*, should be combined, i.e., instead of making the entire turn, as described above, before bending, turn and bend simultaneously.)

ORDER: *rest*.

The entire movement should be repeated ten times.

3. WING

WING: READY: *cross*.

ORDER: *wing* (*one, two, three, four; one, two, three, four*).

(At *wing*, and as the Leader counts *one, two, three, four*, the arms are raised laterally until they are extended straight upward at *one*. At *two*, the arms begin to fall forward and downward and the

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body bends forward from the waist, head up and eyes front, until, at *four*, the body has reached the limit of motion and the arms have passed the sides and have been forced back and (as the trunk assumes a horizontal position) up as far as possible. As the Leader again counts *one, two, three, four*, the body is straightened, reaching an upright position, with arms vertically extended, at *three*. At *four*, the arms are lowered to a *cross* position but with palms up and arms and shoulders forced hard back. Very slow counting is essential to the correct execution of this exercise. All air should be forced from the lungs as the body bends forward to the *wing* position and they should be filled to capacity as the body is straightened and the arms brought up. Inhale through the nose.)

ORDER: *rest*.

The entire movement should be repeated five times.

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INSTRUCTIONS FOR CIVILIAN INDIVIDUALS

THE "DAILY DOZEN SET-UP"

The system consists of twelve exercises. Each exercise starts from the position of attention: heels nearly but not quite together, feet pointing straight forward; body erect on hips, and inclined a little forward; shoulders square and even; arms hanging naturally. Each movement should be slow and measured; guard against a tendency to hurry, or to be careless. The three preliminary exercises are very simple, and used mostly with a leader to acquire quick coördination. First, raise the arms to a horizontal position, then back to position of "attention." Second, raise the arms and, forcing the elbows back, place the hands on the hips; then lower them to the sides. Third, raise the arms once more and, again forcing back the elbows, touch the finger tips at the back of the neck. Repeat each of these movements several times.

These first three exercises called, "Hands, Hips, Head," are extremely valuable as a

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corollary to any drill, for they quicken the muscular coördination and the leader may develop various methods of using them. That is, he may tell his company not to make the motion unless he precedes the call with the word, "Order." Then, too, he may give the order but he himself perform a different movement and insist upon the men following the order. These first three are possible with even a group of two, one giving the orders and the other executing the movements.

Turning now to the other nine movements which are adapted either for group purposes or for the individual. The first caution regarding them is that they are intended as suppling and muscle-stretching exercises as well as breathing exercises, and should be done slowly and rhythmically. Nor should they partake at all of the nature of severe effort. Each movement is made only as far as is comfortable, but the practice of them daily will bring about greater suppleness and freedom of movement so that with entire comfort the motions are increased. As will be seen by the descriptions, they are also

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corrective in quality and designed to prevent certain tendencies which are all too common to the average man or woman in our present civilization.

First Exercise: "GRIND." Raise arms sideways to horizontal position; turn the palms upward and force the arms back as far as possible; while in this position, count slowly from one to ten, and at each count describe a complete circle about 12 inches in diameter, the arms remaining stiff, and pivoting from the shoulders. Then reverse the direction of the circle, and do another ten of them.

This "Grind" exercise is intended not only to lift up the chest but to improve the muscles of the back over the shoulder blades and thus bind the shoulder blades down so as to prevent dropping forward of the shoulders and the shutting up of the chest. It improves the poise and balance and gives a better shoulder, while preventing the tendency among almost all people to-day to stoop.

Second Exercise: "GRATE." Raise arms as before to horizontal. Then while taking a deep breath, raise the arms to an angle of

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forty-five degrees, and also raise the heels until you are resting on the balls of the feet. Then, while you slowly let out the breath, come back to the original position, feet flat on the floor, arms horizontal. Be careful not to raise the arms more than forty-five degrees, or return them to below horizontal. Do this ten times.

This exercise puts in very small compass a fair amount of effort on the shoulder, for by never raising the arms above an angle of 45 degrees, and never letting them move below the horizontal the weight of the arm is used to increase the muscular effort so that ten or a dozen of these motions are equivalent to several hundred where the arms are raised clear up over the head. Then, too, the rising upon the toes or balls of the feet in each one of these motions helps to correct a tendency to flat feet, for the arch of the foot must support the body, and, more than that, in a way to keep the body balanced. The breathing is not intended for a strenuous breathing exercise but merely to get a rhythmic breath corresponding to the exercise.

Third Exercise: "GRASP." Raise the arms

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as before to horizontal. Place hands behind the neck, index fingers touching, elbows forced back. While in this position, bend the body slowly forward from the waist as far as comfortable, keeping the head up and looking forward, not down. Return to upright position, and bend backward, as far as comfortable only. Do not make these movements jerky and do not hurry through them. Repeat the whole movement, bending forward, then straightening up, then bending backward, five times.

The keeping of the head up and the eyes forward aids in this exercise in strengthening the muscles of the neck. It is well also in performing this exercise to inhale while the body is coming up and to exhale while it is going down forward, making the breathing rhythmic as in the preceding exercise.

Fourth Exercise: "CRAWL." Raise arms as before to horizontal. Turn the left palm upward; then raise the left arm and lower the right, until the right is down close to the side, and the left is straight up overhead. Then slowly bend the body sideways from the waist, the right hand slipping down the right leg to or below the knee, or as far as

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is comfortable, and the left arm bending in half a circle downward over the head, until the fingers touch the right ear. Return to original position, and go down the other way, the left hand slipping along the left leg, the right arm bending downward in half a circle over the left ear. Do this five times.

This exercise supple the body at the waist, has a tendency to "massage" the intestines and especially the colon, and tends to increase the secretions. It also supplements in a way the rest of the exercises by giving the body a sideways motion. We tend to move straight forward and back in the ordinary pursuits of life and lose the ability to bend the body from side to side.

Fifth Exercise: "CURL." (A) Raise the arms as before to horizontal. Move the right foot twelve inches from the left. Slowly bend the fists and lower arms downward from the elbows. Then curl the fists upward into the armpits, bending the head backward meanwhile until you look upward at the ceiling. Take a deep breath slowly as you bend the head back and

(B) Then, without pausing, extend the

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arms straight forward from the shoulders, palms down; let the arms begin to fall and the body to bend forward from the waist, head up, eyes to the front, until the body has reached the limit of motion, and the arms have passed the sides and been forced back and up as far as possible. The deep breath, taken as you go up, should be exhaled slowly as you come down. Do the whole exercise (A and B) five times.

This exercise is a breathing exercise but it is supplemented by the muscular effort so that the thoracic cavity is lifted up and increased. The ribs are fanned out and the abdomen drawn in so that the figure is improved.

Sixth Exercise: "CROUCH." Move the right foot until the heels are about 12 inches apart. Raise arms to horizontal. Bend the knees and, with the weight on the toes, lower the body almost to the heels, keeping the trunk as nearly erect as possible. Do this ten times.

This is a leg exercise but it is not intended particularly to develop the legs but rather to secure control of the back muscles, get

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poise and balance and at the same time, as in the "Grate," to prevent any tendency to flat feet. The holding of the body up with the heels lifted and keeping the balance exercises the arch of the foot.

Seventh Exercise: "WAVE." Raise arms as before, horizontal. Stretch the arms straight above the head, fingers interlocked, arms touching ears. Then with the fingers still interlocked describe a complete circle about 24 inches in diameter, the body bending only at the waist. Do this five times. Then repeat the movement five times, but in the opposite direction. Go through the entire movement slowly, and steadily, bending the body in its rotation as far as comfortable and from the hips.

Here again by this exercise we supple the waist and produce the same effect as massage by giving muscular control and balance and at the same time very decidedly lifting up the chest.

Eighth Exercise: "WEAVE." (A) Move the right foot until the heels are 12 inches apart. Raise arms to horizontal and turn the body to the left from the hips, the arms

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remaining horizontal until the face is to the left, the right arm pointing straight forward, and the left arm straight backward.

(B) While in this position, bend the body from the waist, so that the right arm goes down until the right fingers touch the floor midway between the feet, and the left arm goes up. The right knee should be bent to accomplish this. Reverse the movement, moving the left foot until the heels are 12 inches apart, and turning the body to the right this time until the left hand points straight forward, then bending downward until the fingers of the left hand touch the floor. Return each time to the original position, body erect, arms horizontal. After you have mastered the exercise, you can go through it (A and B) in one continuous motion. Repeat the whole (A and B) first to the right, then to the left, ten times.

This exercise continues the work of the waist and at the same time is very rhythmic in its character and gives ease and gracefulness to the body. The turn of the hip is similar to what the golf instructor urges upon the player.

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Ninth Exercise: "WING." Raise arms to horizontal; then upward until they are straight overhead; then let them fall forward and downward, while the body bends forward from the waist, and the arms have passed the sides, and been forced upward and backward as far as possible, just as in the "curl." Remember, as you bend forward, to keep the head up, and the eyes to the front. Straighten the body upright, with the arms forward, then carry them out to the horizontal once more and finally lift them up over the head and start the movement over again. Repeat this entire movement slowly five times, forcing the air out of the lungs as the body bends forward, and filling the lungs again as the body straightens.

This is a breathing exercise for a finale to the whole set and should be done slowly and smoothly and after a short time of practice it will be possible to make the breathing slow and rhythmic to correspond with the swing of the arms and body and it produces a most agreeable sense of exhilaration.

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TREAT YOUR HEALTH BALANCE AS YOU WOULD YOUR BANK BALANCE

We are still running through the maze of follies. We forget all about the fact that one cannot draw upon his stamina unduly any more than he can draw upon his bank account. If sleep and rest fill up the balance at the bank and the man next day draws more than he has stored up and continues to do this, that bowl of vitality soon reaches low ebb just as would his bank balance, and he finds he is drawing against something which he does not possess. Here are some instructions given by supposedly intelligent mentors, to men of middle life:

"Do twenty rigid body lifts on the arms from the floor. Follow this with twenty deep knee flections from the erect posture. Follow that with twenty forward bends of the body, knees stiff, attempting to touch the floor with the fingers. Follow this with ten backward high kicks with each leg. Follow this with ten bends to each side, endeavoring to touch the floor behind the heels with the fingers . . ." and so on. And this, too, is given to men who have not taken any exer-

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cise. Heaven help us! When will we wake up . . . ?

OVERDRAFTS ON THE BANK OF HEALTH

And still it goes on!

The President of the Old Dominion Steamship Line has gone at forty-six years of age. He had been in ill health for about three weeks, due to overwork. His physician had advised him to take a rest but he refused, saying that after a week or so his work would be cleaned up and he would then go away on a vacation. Nature will no more stand for overdrafts than will a man's bank, and yet there are thousands of our able executives who forget this. Nor will an orgy of a vacation taken once in a while wholly answer the purpose. It is the keeping fit daily that in the long run enables the human machine to do its work without breakdown.

EVEN THE OLD TIMERS AWAKENING TO THE NEW GOSPEL

Who would have thought that the new idea of simple exercises and deep breathing with the hygienic principle of seven or eight

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glasses of water a day would have made headway with the old school of fighters? But "Kid" McCoy says: "I used to think years ago that I'd kick off when I got to be forty-five. I thought sure that I'd have had enough of life by then. A few years ago I tumbled onto this water and deep-breathing thing and now I'm going to be one hundred years old before I kiss this old place good-by. I'm better physically right now than I was ten years ago. I'll go for the century sure." And so it goes; we find that the old type who used to take men into gymnasiums and put them through the antique Swedish exercises, dumbbells, pulley and all the apparatus, carry them to a point of almost physical exhaustion, lame them and tire them and reduce their vitality while building up extraordinary muscular development is passing away. Men no longer stand for this. When they use their arms and legs they want to have some pleasure out of it in games. And so we find that set-up exercises are being more and more regarded as "preparatory" for daily suppling and stretching of the large muscles of the body. The lifting of the ribs and the whole thoracic cage in breathing ex-

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ercises and the pleasurable exhilaration that comes from all this is worth a thousand times the big muscles and lowered vitality that comes from the old-fashioned grueling work that left a man exhausted. Indeed the world does move after all.

WELL-KNOWN ATHLETIC PRINCIPLE

And here is another that should most decidedly have more than a passing hearing:

“Personally I would not suggest any hard drills just after meals, such as bayonet drills or hard physical exercises. A man should have something easy for at least an hour and a half after meal times.”

This reflects very much upon the judgment of the man who had this in charge. If we are to keep men fit, we must follow the already thoroughly proven rules. It is not a question of whether some men can stand it and come through, it is the real art of handling men in service to have as many as possible in condition at all times and make them better. The Spartan principles, the survival of the fittest, may have produced some wonderful specimens of exceptional men, but

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that is not what we are after in the science of war, and officers who are guilty of making mistakes in this respect are as dangerous as those who would ruin a piece of ordnance.

MORE OF THE FOLLY OF OVER-DOING IT

Here is a letter that I have just received from a man who is making a study of present conditions:

"Just the other day, in a large vaudeville theater, I saw a man demonstrating how to get and remain physically fit. He was one of the bulgy muscle kind, and he did all the conventional things, exercising the muscle of the calf and hips, and the biceps, not once doing a single thing that the ordinary man needs to do. Yet he got a big round of applause, and no doubt many a deluded fellow went home and began rising and falling on his toes and bending forward trying to touch the floor. One of the things the instructor said was this, 'When you are so tired you can't do any more, do it again. And when you think you will tumble to the floor with another effort, do it again. AGAIN, AGAIN! (Applause.)' "

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SPORTS AND GAMES

There is a time in life for all games and it is the wise man who takes each at its proper period.

Football and baseball cover a decade from fifteen to twenty-five. It is then that the virile youth enjoys most and is best fitted for the games of vigorous physical contact, man to man bitter struggle, and it is these games that make not only physically for his all-around development, but mentally for his acquisition of unselfish team work. He should get a smattering of tennis and golf but they should not occupy the entire foreground of his vision to the exclusion of the more vigorous struggle of the gridiron and the diamond. When he gets into his life's work after twenty-five he has no longer either the time for continued practice and development of these games, nor is his physical condition such as to make them advisable, that is, for the average man. Tennis then supplies the need, and games of that nature. For the next decade, twenty-five to thirty-five, tennis, squash and some leaning towards golf

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make the ideal combination. The former can be continued well up to forty, and by some a little beyond. But at thirty-five, it is wise to begin planning for what must come at fifty, and that is a turn to the links. After forty, golf should become more and more the practice pastime. And wise is he who bears in mind that orgies of exercise, whether 36 holes of golf on a hilly course, once a week, or a vacation of a couple of weeks, and daily 36-hole rounds, are really after all contrary to Nature's methods, and may be attended with quite the reverse of satisfactory results. Daily regular exercise in moderate doses is the thing that will keep men fit, instead of unfit, and an extremely sedentary fifty weeks then broken into by a debauch of exercise for two weeks oftentimes shocks Nature to the point of bringing about a low condition of the system which may beyond doubt account for the well-recognized susceptibility to disease in the fall when men return from these vacations. Nature moves steadily, but moves slowly and methodically, and does nothing in a hurry, and she objects most strenuously to a sudden upsetting of her plans. A man,

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through her economy, gradually adjusts himself to the conditions under which he must work and while she has made all her plans and shrunken down his muscles so that they are not taxing him, she views with horror the sudden plunge into the dissipation for a brief period of these orgies of violent physical effort, for which she has made no preparation and in fact has, supposing the man must go without exercise, adjusted his whole economy to that condition.

GOLF

Golf is one of the finest games that has come in to the *mores* or customs of these United States within the last generation. It has altered the outlook on life for thousands and thousands of the middle-aged. It has brought sunshine and fresh air into the thoughts of mature men who a generation ago, when approaching forty, were gradually contracting their vista into a narrow lane of business and professional interests, with no outlet from the cramped, confining one-sided view of life. Go where one will nowadays, summer or winter, he finds men from forty to seventy years of age, filling up the

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northern golf courses in the summer and the southern courses in the winter.

We all know how much good golf has done men like Arthur Balfour and our own President Wilson. Balfour once wrote a friend that he judges men according to whether they played golf or not and nations according to whether they played games or not.

Sir Douglas Haig once said there was no game like Rugby football for boys, but the time came when they got too stiff to play Rugby and then the delights of golf were appreciated. Perhaps there is nothing quite so subtle (if it may be so termed) as the action of the German delegates at Versailles in bringing many golf kits with their luggage. It is said they told an American reporter, "We, too, are golf loafers!" But as already stated, there is another side to the shield and one which must be considered a very serious one. Altsheler, the author of boys' books, recently died, and the report is current that it was from heart disease induced by over-strenuous golf. Another literary light of sixty developed Angina Pectoris after playing two rounds a day all of one summer, and died from the disease. As to the effect of strenuous

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exercise, in this later period of life, elderly men should remember that care must be exercised. Matthew Arnold's death was caused by heart rupture in jumping a fence. In his early youth he was a first-class runner and jumper and probably forgot for a moment the handicap of age.

Golf has been called the "Old Man's Favorite Game." And perhaps nothing can throw so much light upon this as the bitter criticism evoked from one writer that it was ruining the progression of American business, because it kept old men so physically vigorous that they would not give way to the younger management. That writer contended, and based perhaps somewhat upon the Osler theory before golf was introduced, that a man when he passed fifty began to suffer so physically, that he was only too ready to give way to the younger generation and take to his bath chair and be wheeled around. Whereas nowadays, thanks to golf, he was so physically well and strong that he recognized none of the limitations of age and kept in active management of the business at a time of life when his mental caution had overcome entirely his youthful ambition for

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progress and consequently his business was no longer conducted upon progressive and aggressive lines.

CAUTIONS

When we have said golf from forty to seventy we must not be interpreted as meaning that a man of any age may play golf to the degree of dissipation. For instance, when we prescribe golf for the man of fifty to sixty, it should be remembered that golf is not a panacea for all the ills of life, nor still further, is it like money in that you cannot have too much of it. It is like many other things of remarkable health-giving properties if taken in moderation and in reason. And while there are certain conditions that would preclude a man's playing the game, these conditions are unusual and the average man can find little harm and much good in a round of eighteen holes on the links. But overdoing anything after the meridian of life is passed is a serious mistake and may bring untoward consequences. For instance, the president of a large manufacturing plant became quite enamored of the game. He had taken it up when he was just about fifty, and had played

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for half a dozen years in reasonable fashion. But it appealed to him so much that when he went on his vacations he played in unreasonable fashion; that is, morning and afternoon every day, and some of it in tournament play, until his physician was obliged to step in and interdict it for a while. For a year or so then, after he was permitted to play again, he took it in reasonable fashion, but once more the charm of the game became too much for his judgment and he dropped back into the old ways of having orgies of it. One day he was out on the links with a friend and after climbing to a hill hole he had just made a shot and was starting off when he dropped dead on the course.

And there is another phase to it, which must be considered, and which is contributory to disagreeable results. That is the case of a man who is naturally extremely keen on competition, and who is so high-strung nervously, that playing badly depresses him unduly. We are all familiar with this type and in the average run nothing serious results from it. But there are exceptional cases. There have been men who, taking up the game in middle life, played extraordi-

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narily well and progressed very rapidly until they were exceptions and could compete successfully with even some of the low-handicapped men. It would seem that this would be enough without taking the game so seriously as to let it affect the spirits. But there have been cases of this kind known where a man after playing such a good game for a period of a year or two has found his game go off and this has so seriously depressed his spirits as to really affect him mentally and physically. There is one case of this kind where a man whose game had slumped badly actually committed suicide on the course. This is not likely to be feared, but the same depression of spirit even partly counteracted is not good for the general health. Golf is a fickle mistress at best and the very time when she is showering her favors upon the player may suddenly turn her back upon him, and if his passion is so great that he cannot accept the jilting philosophically, the game is likely to do him greater harm than good. This fickleness of the jade is not confined to old men, but happens with all players and must be reckoned with when considering the value of the sport.

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GOLF MARATHON

Fred Knight failed in his first attempt at Whitemarsh, in which he had wagered he could play seven rounds of the course in a day with an average of 85 strokes to the round. His actual average was some three strokes over this, but he completed eight full rounds of that eighteen-hole course starting at half past six and finishing at seven. However, it is greatly to be hoped that the "Marathon craze," which came near being disastrous to the youth of this country at one time in road running, will not now seize upon our golfers and cause them to turn our links into endurance and speed tracks! Let the average golfer forget ambition in this line and be content with his 18 or 36 holes a day, and thank his stars if he can play even these modest rounds steadily under the 90 mark!

OTHER GOLFING FEATS OF ENDURANCE

Naturally, this feat of Knight's has started considerable discussion. In fact, many have come to the front to demonstrate that his

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eight rounds did not constitute a record. That is quite true, but Knight's venture was not what they assume, an attempt to see how far or fast a man could walk and incidentally swing golf clubs. His was the result of a wager that he could play seven rounds in a day with an average of 85 strokes to a round, a very different proposition on its face, for it takes a fairly good golfer to consistently play at an 85 rate, as thousands of men on the links will readily admit. According to a statistician, Lytton and McCaigey at Exmoor, a decade ago, played 153 holes between 4:30 a. m. and 7:50 p. m., while a Scottish golfer, Lumsden, played at Aberdeen, 216 holes, starting at 2:30 a. m. and finishing at 9 p. m. Americans must go to the north of Scotland to have any chance at such a Marathon. But the point is that the golfer should do some golf, that is, make some respectable score to render the feat a combination of endurance and skill, or else why hit the ball at all or why carry the clubs?

MANIAS

Three killed and two seriously injured before the race was half over, shocked the 125,-

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ooo spectators on the Indianapolis Speedway into a gloomy quiet for a time. Lecocq and Badmin overturned and burned beyond recognition, and Thurman crushed by an overturn on the back stretch marked the toll of the grim reaper, in the mad speed craze. Wilcox won the race in 5 hours, 44 minutes, 21.75 seconds, or an average of 87.12 miles an hour. But there is after all, perhaps, some excuse or even reason for these speed tests, for they have been the means of finding out and improving the weak parts in automobile construction. But what shall one say of the following—the wild chance-taking without reason of men like Schreyer?

“DAREDEVIL” SCHREYER

Max Schreyer—“Daredevil” Schreyer, forty years old, who has been making that marvelous plunge of his for over two thousand times—going down a chute on his bicycle, and taking off from a springboard in a curving leap, in which he drops his bicycle and plunges into a small tank, took his last flight recently. On the two thousandth and twentieth time, he failed, fell short and struck the near side of the tank, and died

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thereafter in the hospital. But it was a living for him and we can better forgive even such a way of making a living than we can the criminal neglect of health that is going on around us all the time, and compared with which in actual loss to the community such things as automobile races and daredevil feats sink into insignificance.

PART III
REVIEWING FOLLIES

III

REVIEWING FOLLIES

IT seems to be a fact that the average man, although he knows what is good for himself, is by no manner of means thoughtful or careful enough to profit by that knowledge. Because people will be silly and do things that are foolish, there is placed in a number of headings here a list of these foolish things and an attempt is made to let men and women see what consequences follow some of these follies. This will, it is hoped, from the mere reading, suggest a train of thought that may be the salvation of some of those who have been indulging in practices that have been undermining their health for some time.

WHAT CIVILIZATION DOES

We are all wild animals in a state of captivity. An outdoor man can eat anything which does not eat him first! If we were on perpetual vacations out of doors we should not need to bother very much about

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our physical condition. Civilization has confined us within four walls, and it makes necessary a great many of the substitutes for outdoor life, without which the race deteriorates. While civilization has given us pleasures and wonderful advances, it has tended to compress our advantages for physical well-being into a very small compass.

For instance, we are now binding up our necks in collars and no more conspicuous example of this can be found than in the uniform of the service where the throat is under two or three thicknesses and not only uncomfortable, but rendered particularly sensitive. Instead of restful use of our eyes we drive them by artificial light. We no longer allow nightfall to send us to sleep. Most of us in our daily work have no longer the sweat of the brow. A great deal of our mastication or chewing is done for us. We alternate cold drinks and hot drinks, and we use all kinds of conveyances rather than walk.

WHAT GETTING OVERTIRED DOES

Getting overtired reduces the resistive force, lowers the bowl of vitality and generally predisposes to disease. Repeated ex-

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cesses of this kind, if continued, will make the subject a prey for any germs that are in existence. People think that getting overtired merely affects the muscles. It affects the nerves even more, for in fatigue it is the nervous stimulus to the muscles which gives way first and not the muscle itself.

It so happens that a great many people get overtired before they fully realize it. And in the case of some people, where there is a real danger in this getting overtired, immediate means to counteract the effects are necessary. Now, if one is physically overtired, naturally the first thing to do is to rest. Some people do this. Others go on to a point of exhaustion. But at any rate, rest is the quickest cure, and for a severe case of exhaustion, lying down in a darkened room. Sometimes this is impossible, but at any rate, get the body prone and relax physically as much as possible. Begin breathing deeply and steadily. Take some slow breathing exercises or some slow muscle stretching exercises. This helps to get control over the brain. Food and refreshment should be taken as soon as sufficiently rested, but in small quantities, and particularly one should

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be guided by the appetite in this respect and not try to force food down into a tired stomach. The great thing after becoming partially rested is to store up energy again before running the risk of further depletion. Almost everyone knows what particular thing starts him or her upon the road to one of these orgies that results in temporary exhaustion, and the main thing to do is to avoid the temptation.

Middle-aged golfers realize that on a certain day they have played golf to the point of exhaustion and yet they are likely to repeat this again and again. Sometimes serious results come. The great point in these cases is to avoid temptation. Make plans so that only half a day is possible. If on a vacation, motor in the morning and only arrive at the golf course in the afternoon, or make such engagement for the afternoon as admits only playing in the morning. As a matter of fact, it is probably better to do the active exercise in the morning, when the physical powers are at their best. At any rate, it should be thoroughly borne in mind that exhausting the energy reduces the resistive power and prepares the way for trouble.

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WHAT AN ORGY OF EXERCISE DOES

There are many people who believe that they can do anything they please for a week as long as they indulge in an orgy of exercise at the week-end. They are the same ones who believe that they can get through a year by having two weeks' vacation in which they take violent exercise of all kinds to the point of exhaustion, and while naturally the fresh air and the outdoor work give them an appetite, at the end of the two weeks they come back with a coat of tan and better muscular development and think that they have therefore repaired all the damages of the year. Most of these cases not only have not repaired the damage, but they have done more. They have added to it. It is easy to recognize these cases from the fact that when they first come back they are rather glad to take things easy and within a week or two begin to dread the thought of any exercise, as their business tires them out too much, and finally in a month or two they are putting on flesh rapidly, still holding on to the appetite gained out of doors, but

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doing nothing to earn the right to indulge that appetite.

We have all seen in tennis tournaments and golf tournaments even with comparatively young men, what an extreme of violent exercise does, not only to the appetite, but to the sleep and to all the restorative powers. Even easy things, persisted in too long under the spur of contest and excitement, are very likely to be overdone. Of course, the business or professional man is hardly likely to undertake anything like a Marathon race, for there we have the extreme example of overexertion and unless even the best athlete is properly trained and conditioned for this, it is an undue strain on the physical man. A fair measure with the ordinary individual as to whether he is indulging in orgies of exercise is whether he is completely restored by a night's sleep. If his sleep is uneasy, and if he awakens and feels "seedy" and non-energetic the next day, the chances are he is taking too much. And there is an added feature to remember in this, and that is that under these orgies a man loses in the quality of his game. He is not so keen about it, and while he is anxious

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to play, there is not that pleasure in it that he found at the beginning. This will come back with rest, but if the orgy is continued, not only will his physical condition suffer, but also his ability to do the thing well.

WHAT FEAR DOES

Fear practically paralyzes not only muscular control, but mental alertness. It does more than this. A sudden fright we are all familiar with, and know what extraordinary conditions it may produce for the moment. But what preys upon the health is a continued fear, a dread, an anticipation of injury. This goes far to produce unnatural conditions and, if continued, leads to disease. Fear interferes with digestion, and in fact with all the processes of the body. It is true, as has been said in so many forms, that most of the things we dread never happen, and our fear has been useless in warding them off because they never came. Fear can be controlled although not entirely. The old saying is true—"The coward dies a thousand deaths, the brave man dies but one."

All of us recognize the sudden tremor of the hands or fingers when we become

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afraid. We feel that thump of the heart. But fear may operate slowly. We may live in dread and that gradually lowers the tone of the system, and although it does not bring the immediate results that a sudden shock does, it gradually saps the nerves. The best relief for an acute case is to do something, to get the blood into normal circulation once more, to breathe deeply, to think of brave things, to remember that even death, come it slow or fast, is only death that comes at last. Very soon the mental control can be restored and the system adjust itself once more.

WHAT ANGER DOES

Anger piles up the poisons in the system. It is not unusual for a person who gets thoroughly angry to find that the ebullition is followed by some kind of illness. It sets the nerves on edge and produces a mental condition, a lack of control which may result in deeds not unlike those caused by real insanity. When a man or woman "sees red," he or she loses all sense of judgment and may even commit a crime punishable by death; a crime which under ordinary circumstances would have seemed to him or her impossi-

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ble. Anger always has its sequelæ in an unbalanced condition of health.

It is unquestionably true that a sudden fit of rage is very often followed in the individual by some definite result in the way of illness. The point, therefore, is, first, not to let anger get control, and, secondly, if it has got control to make a strong mental effort, and this is very often aided very materially by some definite muscular effort. Doing a certain number of exercises and counting. Doing something very slowly. Forcing the mind to think of some pleasures you have enjoyed. Having once restored the equilibrium, then preparation long beforehand to stall off a further attack is essential, for as anger may produce an illness, so it in itself must be prevented. People say that this is impossible, but all coaches and trainers know that football men can be taught not to lose their tempers. In fact, it is essential. And the same is true of boxers. We all recognize that a good golfer may be put off his game by becoming enraged either at his own mistake or, for instance, in a tournament at some sudden movement or exclamation of a bystander that spoils his shot. For quite a

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little period then the golfer is off his game. Many a golfer has improved his play by learning to put behind him and forget the missed stroke; to think only of the hole that is coming, and not dwell upon past mistakes. So the average individual, just as the football player or the boxer or the golfer, can conquer these sudden fits of anger and save immeasurably in health by so doing.

WHAT SHORT SHOES DO

Probably there is no sillier thing that a man or woman can do than to compress a foot into a shoe that is too short. It turns the great toe under or to the side, forces out prominently the large joint at the base, results, if continued, in an entire misshape of the foot, and finally has a very distinct effect on the balance of the body, throwing it out of alignment, so that the knee and hip may not work easily and properly. It is liable to bruise the nail of the great toe and produce permanent trouble. Short shoes make walking difficult and tiring as they affect the balance and poise of the body. Moreover, walking is less beneficial under these circumstances, because the wearer favors the

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feet and cannot step vigorously and get the full benefit of vigorous walking. A short shoe by turning the great toe to the side is very apt to produce a bunion on the large joint. One should never wear a shoe that even feels short, where even the tip of the great toe feels that it is touching the end of the shoe. If you have been wearing such shoes, the cheapest thing in the way of health and the greatest economy in the long run, is to cast them aside, and get shoes that are long enough. Sometimes it is advisable, as a corrective, to get shoes that are slightly narrower to bring back the shape of the foot. At any rate, have a shoe that fits snugly over the instep, so that the foot does not slide forward in the shoe. It is a fact that many times, a shoe that is a little short may be made perfectly comfortable by lowering the heels, but the main thing is to see that the pressure on the end of the toe is relieved.

WHAT TIGHT SHOES DO

Tight shoes that are not short do not deform the feet as much as short shoes, but a tight shoe has a very distinct effect on the

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general health. Probably the easiest way for a person to put himself in condition for catching cold is to wear tight shoes. It interferes with the circulation and produces really cold feet, at which Nature rebels by producing a sense of general discomfort. It is not necessary to wear extremely loose shoes. In fact, it is a mistake, and very often produces abrasions of the skin; but, on the other hand, a shoe that pinches will interfere with the general health of the person wearing it far more than is usually supposed. It is not necessary to point out the difficulties in the shape of corns and general trouble with the feet that come from tight or poorly fitting shoes, but it is wise to remember that the general health and temper are both materially affected in this way.

A shoe may be snug and yet not tight, if it fits the foot perfectly and that, too, especially about the instep. A low instep tends to let the foot slide down into the shoe and produces almost the same result as a short shoe. Care should be exercised that the shoe does not press on the outer joint of the little toe, for here is where most corns are started. Another thing advisable to bear in

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mind is that, for exposure and cold weather, the looser the shoe the better, so long as it does not abrade the foot. In fact, for severe exposure a shoe a few sizes too large, with newspaper put inside, is a very good expedient. Special care should be advised in the use of athletic shoes and shoes for tennis, golf, running, baseball and football. Fortunately, the makers understand the art pretty well, but the individual should remember that the greatest care should be exercised in getting shoes that fit for these purposes, as the foot is used hard in these athletic sports and consequently a good fit is essential.

WHAT TIGHT COLLARS AND TIGHT CLOTHES DO

A tight collar compresses the arteries in the neck, and is very apt to lead to headache, or a general cerebral congestion. Moreover, a tight collar makes the neck and throat extremely sensitive and renders the subject liable to irritation in the air passages. Tight clothes restrict the circulation, and thus interfere greatly with the general health. Collars, clothes, gloves, as well as shoes, should always be moderately loose for com-

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fort. The shoes can fit more closely, but if you wish to keep your hands warm the looser the glove the better, and the same is true about the clothes. Tight belts, or in fact, anything that constricts the body, if persisted in, leads to difficulty in the circulation, and that to discomfort and disease.

No more striking instance of the folly of modern forms has ever been put before us than in the service uniforms of our soldiers and naval officers. The high collar is an abomination, and probably before this is in print alterations will be made and reasonable uniforms will be devised that do not bundle up and constrict the throat and neck. As far as personal appearance is concerned, many people past middle age now realize how tight, high collars produce wrinkled, scrawny necks in the long run. Every man should also remember that boils come from a rough collar or collar button pressing on the back of the neck. Soft collars are coming in so much nowadays that we are reaching a point of immense improvement. But where it is necessary to wear stiff collars, the Englishman is more nearly right than we in getting them large. At any rate, even

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though a collar fits well it should not be so tight as to constrict the throat or it will bring on headaches and other uncomfortable conditions. Every one is pretty well convinced of the evils of tight clothes, but the way clothes are worn has a great deal to do with the conditions. A man can go farther and work more at ease with some form of suspender than with a belt. This is not generally recognized, but it is nevertheless true. Moreover, the belt pulled up too tight is a distinct disadvantage. The easiest and coolest costume for long work in warm weather is trousers supported by suspenders, and a shirt cut as boys' jumpers are cut, namely, short and with a string around the waist.

WHAT FRESH AIR DOES

Every one knows what a relief it is to step out of a close room and get a good long breath of fresh air. Fresh air furnishes the aëration through the blood to the lungs. Fresh air is a foe to germs. Moving fresh air is a great factor in adjusting the temperature of the body. Get all the fresh air you can. It is perfectly true that Nature is

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such a good mother that she adjusts the economy of man to what is forced upon him. Plenty of people live and work without much fresh air. It is, of course, carrying the fresh-air idea to extremes when a person walks to work and then sits down at a desk immediately under a window with a draught striking one side of the body. It is difficult to catch cold out of doors, but narrow draughts will chill and upset the circulation. Do not then blame a person who objects to having a window open on him, but bear in mind all the time, that closed windows throughout are more inducive to colds than any amount of fresh air. The best thing in the world is, of course, exercise out of doors in any temperature. If the body is kept moving, it is difficult even at low temperatures to suffer from colds. If you feel cold, keep moving. Particularly if you are wet and cold the body must be kept in motion until you have the opportunity of changing to dry clothes. To sit still with wet feet is very apt to produce bad results, but no amount of tramping around with wet feet will do any harm.

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WHAT WATER DOES

Water is one of the finest things that was ever given to us. It should be used freely, inside and outside. Eight glasses of water a day, most of it between meals, keeps the system in good condition and helps very materially to ward off any possible ills. Bathing cleans the pores of the skin and is also a stimulus to the skin as well as to the heart action. Drinking plenty of water helps the kidneys, and also prevents constipation.

There are several views as to taking water with meals. Food will digest when water is poured into the stomach at the same time, but the usual difficulty is that men in training and men out of it get a habit, especially in warm weather, of pouring in large quantities of iced drinks with their meals, and plenty of examples can be offered of men who under these conditions did not get the proper nourishment. A glass of cool water is a stimulant for the stomach and if taken a short time before a meal starts the gastric juices flowing and gives an appetite. Iced water has been more condemned than it deserves, but just the same it does take about

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twenty minutes for the normal stomach to raise the temperature of a glass of iced water to the body level, and there have been too many instances of people who have suffered more or less serious results from over-indulgence. Consequently, it is better to take water cool, but not iced, and to drink most of the eight glasses of water a day outside of mealtimes. One suggestion is advisable, and that is, that one should stand erect with lifted chest when drinking a glass of water.

Bathing we all recognize as an asset in keeping the pores of the skin open and the body clean. It is also a stimulant and a tonic. Salt water has no particular virtues from the salt alone in it, but swimming is a capital exercise, if not indulged in to extremes, and is more agreeable in salt water than in fresh, although there is not a great deal of difference. It is highly unwise to plunge into a cold bath, whether in the ocean or lake, when unduly heated with exercise. In a clubhouse, where conveniences are accessible, starting with a warm or hot shower after exercise, and then changing to cold is the wise plan. Too frequent indulgence in Turkish baths is a mistake. Nature has

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given a certain protective layer of skin, and if that is too much peeled off its condition is unnatural.

WHAT ROUND SHOULDERS DO

Round shoulders spoil the appearance of the figure, but they do far more than this. They shut up the chest capacity, crowd all the internal organs and eventually lead to a great many of the ills to which flesh is heir. For this very reason they lower materially the resistive force and sap the courage. A round-shouldered man or woman never gets credit for his or her full value and this reverts again to the health side, producing depression and a sense of imposition. Employers, instinctively, turn down the round-shouldered applicant, and there is reason behind this.

WHAT RESISTIVE FORCE IS

Resistive force is a mysterious quality which enables one to throw off disease, to stand shocks, to come back under depression, and in a word to possess resilience to all blows. Resistive force usually comes from a good condition of health. The lack

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of it is very often brought about by exhaustion, and getting tired repeatedly—the cumulative effect of going to bed every night tired out. This gradually saps the resistive force until one is prey to all forms of disease, and especially in the case of epidemics.

WHAT HIGH VITALITY MEANS

We all recognize in people around us a difference in vitality. High vitality usually means and comes from good health, although there are exceptions. But vitality can be raised by improving the health, and high vitality almost always means ability to stand up against hard knocks. It can be cultivated by the exercise of self-control against depression, although it is not always possible for any one to acquire this against all odds. People differ in their characteristics in this respect, but every one can improve and can change from a general attitude of pessimism to that of fair optimism.

WHAT PLEASURABLE EXERCISE DOES

Pleasurable exercise gives twofold effects, for it stimulates the circulation, through the operation of the muscles, and at the same

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time gives enjoyment to the individual practicing it. That is why our sports and games are so much better exercise than any other cut-and-dried form of muscle movement. Wherever possible, therefore, exercise should be of the character that affords pleasure at the same time. And the opportunity to indulge in pleasurable exercise out of doors in the form of sport is infinitely to be preferred to any gymnasium or apparatus operations.

WHAT BORING EXERCISE DOES

Here we have the very reverse of pleasurable exercise. In fact, there is a great deal of doubt whether an exercise which actually bores one gives any beneficial result at all. At most, it may have some muscular effect, but this is largely offset by the disagreeable sensations and the only way to make exercise which is likely to be boring of value is to get a different viewpoint about it and to see or imagine its possibility for benefit. That will help a little, but fixing the mind upon the body and the strength and grace derived from the exercise will help more.

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WHAT MUSIC DOES

Any one who has seen a big body of men singing in concert in the service realizes how inspiring this mass singing is. It tones up the nerve and courage. It also exercises the lungs in a pleasurable way. The music of a band will carry marching men along with a swing, whereas without the band they would long before have shown symptoms of exhaustion. It is a distinct stimulant and should be taken advantage of wherever possible.

WHAT REGULARITY MEANS

Regularity in health habits is one of the greatest assets that an individual can possess. Nature seems to prefer to have things done in a regular and orderly way and good habits once acquired can be kept up with less and less effort on account of their regularity. Regular times for exercise, regular times for eating, regular times for sleeping, all add immensely to the health prospects of the individual. It is not necessary to carry this to the extreme and an occasional breaking over in the point of regularity does not necessarily mean disaster. But just as

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soon as this is persisted in, and irregular habits are formed, there is a distinct falling off in physical fitness.

CARE OF THE EYE

We know much more about the eye now than ever before, and people appreciate the necessity of going to the oculist, but we do not do half enough ourselves to help the eyesight and to remember that while the eye is a wonderful piece of mechanism, it should be taken care of like any other. There are some simple facts that every one should remember, and that is that the eye should be rested occasionally, even for a few seconds. Any break in the continuity of its effort is a relief. Good light when reading or writing is essential, and the eye itself tells one that it does not like a reflected light from the paper. The light should come from over the shoulder, preferably the left shoulder. Nor should the head be stooped over the writing so as to bring the eyes too near the paper—about twelve inches is usually correct. Some eyes are particularly sensitive to vibration, that is, to reading

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on a train or watching motion pictures, and care should be taken in this respect.

CARE OF THE TEETH

This is probably one of the places in which civilization has hit us the hardest, and while there has been a very great awakening on the subject, we are still paying penalties for past forgetfulness. We ought to use the teeth more than we do in vigorous chewing, but most of the food is already prepared for us nowadays. We can, however, see that the teeth are properly cleaned, and, more than that, we can make frequent visits to the dentist and thus make up in part for our inheritance. We must, if we are going to be honest and fair, see that the next generation has all the benefits of early attention to the teeth and frequent examinations. Many a man or woman to-day would have been saved a large amount of ill health, pain and discomfort had his or her parents followed up this principle. Procrastination is folly in this respect and brings untold ills in its train.

The dentist is as important as the oculist and should be consulted frequently. But

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here again, people can do much to aid him by seeing that the teeth are kept clean and that there is enough actual chewing for the teeth to do to keep them in condition.

CARE OF THE FEET

If the athlete takes care of his feet, so much more does it behoove the non-athlete to do so. For, as a rule, his feet are not toughened as are those of the athlete. Shoes that allow the weight to come squarely on the ball of the foot with plenty of room for the toes both laterally and longitudinally are an essential. Cleanliness is also very important. If there is any sign of flat foot or continued pain in the heel, it is well to consult a surgeon, for this may lead to a serious condition.

WHAT SELF-CONTROL DOES

Here is something which the athlete understands well, and which the coach counts upon as a very distinct asset in the good player. This is equally true for the individual who is not "a member of the team." The greatest feature for health is in the ability to call upon this self-control and by

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means of it to stop worry, fear, or the repetition of thoughts which lead to anger. Merely being able to prevent a mood developing itself into an action is not enough. The control should be exercised far behind this by preventing irritating thoughts and turning the mind definitely into other channels. The farther one goes in this practice the more poise and balance are acquired and the menti-culturists have done a good work for us in stimulating progress along this line. Almost any one can lash himself into a silent rage by thinking of all the disagreeable things that other people have done to him. He can thus develop hatred, envy and all uncharitableness. But the opposite is equally true and by self-control such thoughts can be stopped with a definitely improved condition of health, for a constant "grouch" accentuated will just as surely produce illness of some form as any other poison introduced into the system.

WHAT DEEP BREATHING DOES

Deep breathing should not necessarily be an effort to force to the very limit of distention the lung capacity. Deep breathing

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for the best benefit should be slow and rhythmic, with the diaphragm first going down and then being set while the upper part of the lungs is slowly filled. Steady, slow deep breathing, not only quiets the nerves, but steadies the heart beat and improves the circulation. It is restful and will many times allay a period of excitability. Deep breathing will also prevent colds and oftentimes stop the feeling of cold. It is an excellent plan to practice it when walking, when tired or when passing through a severe nervous tension.

PART IV
CHILDREN, SCHOOLBOY AND
COLLEGIAN

IV

OLD BLUE LAWS

IT is interesting to read in these days the old Connecticut Blue Laws, and see how we have progressed since those times.

No wonder parents under these laws needlessly repressed youthful spirits.

"CONNECTICUT BLUE LAWS."

Enacted by the people of the "Dominion of New Haven," and printed on blue paper.

No one shall run on the Sabbath day, or walk in his garden, or elsewhere, except reverently to and from meeting.

No food or lodging shall be offered to Quaker, Adamite or heretic.

No one shall travel, cook victuals, make beds, sweep houses, cut hair or shave on the Sabbath day.

No one shall read common prayer books, keep Christmas or set days, eat mince pies, dance, play cards or play on any instrument of music except the drum, trumpet or jew's-harp.

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Married persons must live together or be imprisoned.

EXERCISES FOR CHILDREN

In considering exercises for children, there is one cardinal fact to be remembered, and that is that Nature has based her principle of growth of the child upon the fact that every muscle should be exercised in almost every possible way, but never long at a time. The child roams and rolls, dances, hops up and down, does an amount of exercise which tires out the mature man or woman even to watch it, but no child left to itself will do one thing constantly, but is always shifting so that there is no set strain on the muscles. A child will thus play for hours, but the child of the same age taken on a walk will show exhaustion in a very short period of time, and very likely pain in the back or a tired back. Hence, we have the lesson before us, that play is the principal feature, folk dances, games of all kinds that do not require prolonged stress on any one set of muscles. In giving calisthenics to children, they should be limited to a very small period of time, and repeated perhaps

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three or four times a day, preferably as a relief from confined position, as in schools. These calisthenics can occupy two or three minutes at a time. They are especially valuable if properly devised as supplemental to play. It is folly to give arm and leg work, because that should be indulged in in play. The main thing is to lift up the thorax and strengthen the muscles of the back and neck and improve the poise. It is quite silly to nag a child constantly to stand up straight or sit up straight when there are no muscles over the shoulder-blades or back to hold the shoulders up. Most of our plays and games do not cause the child to stand or sit erect or develop these muscles already named, and that is why some supplemental calisthenics of this particular kind is advisable and desirable.

DON'T SUBSTITUTE ADULT IDEA OF PLAY

Now turning to the effect of all this upon our future plans for the civilian population, I cannot refrain from referring in a cautionary way to a criticism which we are likely to forget. One of our most far-seeing

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students of physical fitness for the nation says: "Some adult is always on hand to amuse the child and teach him how to play, for what does this teaching mean if not that it is seeking to substitute the adult idea of play for the childish one . . .?"

This critic has indeed touched on a very vital fact. Play must be developed and in order to do this, we must have it supervised, else many will never get the benefits in their youth, and thus will miss much. But we must be very careful not to fall into the error of substituting what may be the mature man's or woman's idea of amusement for that either of the child or of the youth. The "Don't do that!" which is almost the common expression of the parent toward everything that has in it the element of risk of roughness or apparent silliness, comes from not having the perspective of youth. If our children and our young men followed these mandates we should be substituting the "old man's caution" for the "young man's courage," and that would be fatal.

Moreover, while every reasonable effort should be made to get every one to play we should not run the risk of so substitut-

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ing mass plays for what we already have as to make the whole affair lacking in interest while increasing in numbers.

EXERCISE FOR YOUTH

In relation to exercise for youth in school or college, or where there is a regular drill room for recreation, we have a problem that is a pretty simple one. Games, sports, play of all kinds take on a kind of competitive phase and this spurs on the individual and lends color to the desires of the mass. The principal thing to give a school or college is plenty of field room, for boys and youth will play if there is open space in which to play. Particularly is this true when, as in school or college, there are regular daily hours which can be employed in this manner.

SUGGESTIONS FOR A NEW COLLEGE COURSE

In these days we are facing the new and rather remarkable situation caused by the enormous demand for the trained and educated athletic instructor. Not only was this true throughout the war, but it is becoming doubly true now that the day dawns of in-

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dustrial and plant athletics. In other words, none of the colleges are cutting off their athletic instructors, but increasing the force, and if they intend following out their program for greater distribution of athletic sport among the mass, they will have to still further increase the number of men.

In connection with this comes the point that this athletic instructor, coach, trainer or director has a far more intimate connection with the boy in college or with the youth in the plant than any other man. We recognized for a long time that the coach or trainer of college teams has a far more direct influence upon them morally and physically than any member of the faculty of the university. And, moreover, he comes in touch with him constantly and hence one thing that has been impressed upon all college authorities is the essential fact that a man occupying a position of this kind must be of the very highest type in all respects.

It is very interesting to note, in this connection, that I have just received a letter from a man who follows these things closely, urging that the universities establish a regular chair of athletics, where, as he puts it, the

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professional athlete may be trained, educated and graduated with an athletic degree; that his course consist of whatever major sports he decides to follow, a working, playing and instructing knowledge of all the others, courses in hygiene, first aid, sanitation, dietetics, physiology, chemistry, etc. Although entered in the athletic department, all other branches of the university, except membership on the university teams, should be open to him, and he could and would extend his education to his capacity.

Here is the summary of the way in which my correspondent thinks such a plan would work out.

As a professional such a student would not be allowed to compete on the University teams, but there would be nothing to prevent him from having teams of his own. This would result in the forming of:

- a. Another Intercollegiate League.
- b. An Intercollegiate championship played at the end of each season between the winning Amateur and Professional teams.
- c. The Amateur and Professional teams could have the benefit of practicing with one another.

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Upon graduating, the University would give to the world an educated man, fit to act as instructor in all branches of athletics, at any institution, an expert organizer, an authority on health and physical culture, a competent coach, and, if necessary, a high class professional performer.

The net result would be: More athletics, better instructors. A sharper and more defined line of demarcation between Professional and Amateur Athletes. The uplifting to a higher plane of Professional sports and Sportsmen.

APPLICATION OF LESSONS LEARNED IN THE SERVICE

This war has been the test of us,
And killed some of the best of us,
And made men of the rest of us,
And left no east and west of us.

Wherever, under Secretary Daniels, my work called me in the last two years, whether in naval station, aviation field or "Over There," I found our athletes in the uniform. As a matter of fact, it seemed to me that every living athlete I had known was in service in some way! A large majority of our

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people believed that we should never have another war, that our death-dealing machines had been so perfected that men could not face them. But there is something in the human being that cannot be measured by any of our scientific machines. It is the same thing that we all know in athletics,—pluck, heart, sand. And so, these men of ours went out and faced shells, gas, mud, disease and “went over” just the same.

We were certainly not prepared in a military sense. Yet we moved all too slowly. What did prepare us? We have all been told that our Allies believe it was our training in athletics that made it possible for us to turn out fighting men in such short time. The French and the Italians are taking over all they can of these athletics of ours. We have these facts for a basis. Before the Japanese-Russian war, the proportion of casualties at which an advance stopped was about six per cent. In the Japanese-Russian war, the Japanese at Port Arthur raised this proportion to twelve. That is, their charges would go on up to the point of a casualty proportion of twelve per cent. But our men, over there, went on with over forty

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per cent. of casualties, and the great difficulty we had was with American troops overrunning their objectives! We had had no military preparedness. But all our boys, not alone in school and college, but on the sand lots, in every vacant space where they played on Saturday afternoons had had one great lesson pounded home to them. The cardinal sin in sport is to quit, and in the decalogue of the youth of this nation that was the one unpardonable thing. When our player gets his signal he goes as long as he can stand. So our boys over there, when they got the signal in the real war, instead of on the gridiron, went over and kept going whether there were any others left by their side or not. There is a phase of this in which we are all vitally interested. It is that not alone the man down on the field of play, the man who is actually playing the game, but every one in the stands and on the bleachers has been imbibing that same spirit. The spectator has pushed and crowded and cheered, and each one of them has been playing the game for himself just as he would down on the field. Sometimes with even more desperate abandon. A boy

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may not have been fitted physically to make the team or the nine, and that was the reason he was on the bleachers. If we had had field room enough thousands more would have been down actually in the game. When, therefore, the time came and this boy was given a chance to carry a gun, he realized the great satisfaction at last of getting into the game himself. And all these lessons that he had learned vicariously came out in him a hundredfold.

The reader will be interested in some of the detail of the work which perhaps has not been in public print, and will appreciate the bearing that athletics had on this development and the really astonishing results that were achieved. My work was with the Navy and the Aviators, but the same principles held in cantonment and camp. This is the way we organized a naval station. We had anywhere from ten thousand to fifty thousand men in a station. These men were taken suddenly from their home environment and all the pleasures that they had enjoyed there in their homes were at first thrown into a species of dislocation. You all recognize that at home you generally have

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definite plans for sport on Saturday and Sunday—baseball, tennis, golf, a dozen things to which you each look forward and it helps you to get through Friday to look in anticipation to the week-end. This was equally true of all these boys. When, therefore, they were herded up in a station one thousand miles from home, with no plans of this kind, it was chaotic. At the request of Secretary Daniels, and as I was in charge of the athletic department of the Naval Training Commission, I placed in every naval station of the fifteen districts from Machiasport to Puget Sound, and as far south as Pensacola, first-class representatives, who knew how to handle athletics. Some of these were Yale men, some Princeton men, some Pennsylvania men, and often some men who had not had the college opportunity, but they were all experts at their work. They then went through the station, appointing picked non-commissioned officers, who had specialties in athletics. Each one of these officers would then round up the men who were interested in his particular sport, baseball, football, tennis, rowing, theatricals, playing musical instruments, and within a

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month the station would be organized, each man having an opportunity for some self-expression along his chosen line. At one station we had no less than seventeen football teams, an inter-regimental championship, and, in addition, a station team which practically ran away with the championship of the country. The record of keeping men out of trouble in this way was phenomenal.

SUBMARINE MEN

Another phase of it was in the submarine work, the small subs. Here men are subjected to a most intense physical strain, and under the most adverse conditions. Picture yourself on a cigar-shaped boat that may move smoothly on the surface when the sea is calm, but when the sea is rough, even the temporary life-lines along the side are useless, and men simply hang on and get a little fresh air. When the boat submerges the men go below, the hatches are closed, and the boat then begins to settle. She is full of the fumes of Diesel motors, for these furnish the power when she is running on the surface. It takes several minutes for the boat to submerge, and meantime that roll

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is still obtaining for several feet under the surface and men are thrown around like pills in a box and not against smooth walls, but in a veritable machine shop. On a trip a man may be working nineteen hours out of twenty-four. At the main station, we gave them a week on and a week off—that is, a week of work and then a week shore-leave, and it was small enough. At first barracks covered all the possible playground and the only chance for relaxation was to go into the town. We succeeded eventually, in getting an appropriation of ten thousand dollars, with which we built baseball diamonds and furnished other facilities for sport and relaxation during the week ashore.

AVIATORS

As to the aviator. Here is a case where physical fitness and the knowledge of the condition of a man counts more than in almost any other branch. The aviator is the quarterback of the team. He is the man who sees the lines of the enemy and gives the signals accordingly. We had very careful examinations for the men who were accepted at first, but after this they were al-

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lowed to take care of themselves, and the result was just about what we would have found in a football team without any trainer. These were the boys that you and I know; men of courage, even to the point of recklessness. They certainly would not go to a commanding officer and say, "Sir, I do not feel very well to-day. I don't think I ought to fly." They would take chances. A little indigestion, biliousness, giddiness, makes little difference to a man with his feet on the ground, but it makes a lot of difference to an aviator up there and may mean his death and the loss of his machine. It costs \$1.50 a minute to fly a man until we have made him a pilot at two hundred hours actual flying. That is \$18,000. When you put a \$20,000 machine under him, you have an investment of \$38,000. A man might be perfectly right to fly twenty-eight days out of thirty, but when he was a little out of sorts, it was well worth while to keep him on the ground. At the request then of the Surgeon General and General Lyster, I covered forty aviation fields with trainers, and the results were immediately apparent, and

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we saved nearly fifty per cent of the accidents.

WHAT THIS MEANS

As to what all this means, and what it is going to mean for us in the future. You may have all the good things in the world, but if you have not the self-consciousness to guard these things, to prepare yourselves so that you can guard them against the Hun, they may at any time be swept away. This country was really dependent upon whether its young men of 21 to 31 could and would fight, and, as a matter of fact, we came to the point of going up to 45. Without a military training, the only thing that we had in this country that approached preparation for war was our athletics. And when the draft showed 29 per cent rejections, it indicated that we were growing soft. True, with such an enormous number of men as we had, this rejection did not prove so serious as it would had we been a small people. But we were made aware of the fact that there were too many men who were slowing down at 30, fat at 40, and at 50 had to have a motor car to get them anywhere. And it was not alone the men who

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went into the firing line who had to be made fit and kept so. It takes five men behind the line to support one man in the line, and all our captains of industry, all our men who were producers, all our men who had the planning and general oversight of production had to be kept fit. Hundreds of them broke down, but others took care of themselves in time. It was the biggest, grandest lesson we have ever had. It certainly convinced us that there was no reason for a man in middle life to reach the point of physical deterioration. Physical fitness is the cry of the hour, beginning in the school and following through college or industrial life, and up to executives and managers. Nearly half a million men in industrial work and ranging from 25 to 60 are now giving eight to ten minutes a day to keeping themselves fit—not by the old arm-and-leg work of Swedish systems, but by modern up-to-date setting-up described as the “Daily Dozen” in this book, used largely in Naval stations and Aviation fields, which keeps the “engine” of the man fit. Nor do they lose anything of their playtime. They play their baseball, tennis, golf, motor and do other

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things just the same. And there is still another vision that is coming. Within the last year I have spoken before thousands of superintendents and operatives on industrial or plant athletics. This same method of self-expression, which we put through the naval stations, and which I have described, can be put through industrial life. Teams are being formed and the same partisanship and loyalty that developed in college athletics, and later in these naval stations and aviation fields, can be developed in large plants. We are going to have a steadily-increasing demand for organizers who can handle this work. It is going to be a part of education. We must have the idea of service. We must not lose; in fact, we must magnify, if anything, that spirit of "do-or-die," Yale to beat Harvard, every man to go through self-sacrifice and discipline, to make himself better for that purpose, for it is that kind of spirit that has made us a people. But we must broaden it. We must furnish help to others. We must develop the American spirit of sportsmanship, fair play, a fair field and no favors, and may the best man win. And "when the one Great

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Scorer comes to write against your name, he'll write, not that you won or lost, but how you played the game!"

ADJUTANT'S REPORT ON TRAINER'S WORK IN AVIATION STATION

Here are some evidences of the excellent work of our trainers in the Aviation Fields:

From: Acting Adjutant
To: Whom it may concern
Subject: First Lieutenant ———

I have known 1st Lieutenant ——— for the past six months. He reported at this station for duty as assistant to the Flight Surgeon, and for three months undertook the physical conditioning of the flying cadets at this Field. THE IMPORTANCE OF HIS WORK CAN BE UNDERSTOOD FROM THE FACT THAT THE PHYSICAL CONDITION OF FLYING CADETS MUST BE PERFECT, IN ORDER THAT THEY MAY STAND THE TREMENDOUS PHYSICAL AND NERVOUS STRAIN UNDER WHICH THEY WORK. DURING THE RECENT EPIDEMIC NOT ONE CASE OF INFLUENZA WAS FOUND AMONG THE FLYING CADETS, A FACT ATTRIBUTABLE TO THEIR SPLENDID CONDITION. In addition Lieutenant ——— organized, coached and managed the Field football team, which won the championship of the Southern Department.

And again: When the arrival of 25,000 newly drafted men was expected at this station, Lieutenant

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——— was relieved from duty with the Cadet Department and appointed Athletic Director of the post. He has created a tremendous enthusiasm for athletics, has organized a basket ball league, baseball teams, volley ball teams, track meets, and boxing and wrestling bouts. To be Athletic Director of a camp with a capacity of over 30,000 is no small task, and Lieutenant ——— has demonstrated his ability to develop the athletic tendencies of the men, create a competitive spirit among them, and greatly increase their interest in athletics.

Now all this is equally possible in civilian life. A shop or plant, a town or community can be organized along those same lines and similar benefits derived.

THEODORE ROOSEVELT AND FOOTBALL

As we all loved Theodore Roosevelt, so we read with renewed interest reminiscences of that great man. Here is what he thought of athletics:

Washington, D. C., March 11, 1895

My dear Mr. Camp:

I was genuinely pleased to receive your note and the "Football Facts and Figures." I am ashamed to say that I had never had time to examine the latter before, though of course I often saw it quoted. I was particularly delighted with your putting in the

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extracts from the *Yale Courant* and *Scribner's Monthly*, especially the latter, with its reprobation of brutal baseball, and its championship of croquet as the national game. I read it with delight to my colleague on the Civil Service Commission, Mr. Proctor, a Kentuckian. One of Mr. Proctor's sons is a midshipman. He was on the Annapolis team, and put out his knee just before the game with West Point. Neither the boy nor his father cared a rap about the injury, except because it prevented the boy from playing in the great game. His other son is a freshman at Harvard. Last year he was trying for the team there and broke a bone in his arm, and of course all that either father or son cared about the accident was the fact that it barred the boy from the team.

I do not give a snap for a good man who can't fight and hold his own in the world. A citizen has got to be decent of course. That is the first requisite; but the second, and just as important, is that he shall be efficient, and he can't be efficient unless he is manly. Nothing has impressed me more in meeting college graduates during the years I have been out of college than the fact that on the average the men who have counted most have been those who had sound bodies. Among the Harvard men whom I have known for the last years here in Washington, Lodge, the Senator, was a great swimmer in college, winning a championship, and is a great horseman now. Storer, a Congressman from Cincinnati, played first base on our nine. Hamlin, the Assistant Secretary of the Treasury, also played on the nine. Sherman Hoar, another Congressman, was on our class crew, and so on and

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so on; and I am inclined to think that even more good than comes to the top men from athletics comes to men like myself, who were never more than second-rate in the sports, but who were strengthened in every way by them. The Latin I learned in college has helped me a little in after life in various ways, but boxing has helped me more.

Now, my dear sir, you see what you brought on yourself by sending me the book. I had no idea of inflicting this tirade on you when I began to write.

WHAT ARE WE DOING FOR THE REJECTS?

We are still studying over the question how best to capitalize the lessons learned from the great war. We already know that the effect has permeated not alone college and school life, but has gone far into the whole industrial fabric.

The red-blooded boy will play football and take chances which cause the old man sitting in the stands to hold his breath, and it is upon these chances and others of a like nature that his development depends. A boy is taking chances from the time he gets his first jack-knife, climbs the cherry tree, plays football, rides, swims, shoots and fishes until he comes through it all to man's estate. This

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applies to the boy in the factory just as it does to the boy in college and to every boy who was in service. In other words, we must always have the vigorous, strenuous, risky, if you please to call it so, kind of sport. We need the intensity of competition, for that is what has built up the American breed and that breed has made good in the hour of emergency. But we must go farther. We must build up the boy and man who have proved to be below par—not in spirit, for thousands of the rejected ones were the most eager to go into service—but we must look more carefully and more thoroughly into that period in life which has failed to give the boy a rugged sound physique. It is that problem which should interest the best minds of the country.

LACK OF INITIATIVE

Here are some reports of the results of Army life on men. One has this to say:

“Army life has a tendency to make a man lazy and to lose whatever initiative he might have had by the cut and dried process of Army red tape.”

Some excuse can be offered in this case.

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Handling large bodies of men must always mean more or less conventional methods. As an officer said, "You must make instructions or orders 'fool proof' so that any one can interpret them." Men in groups must be instructed by general methods. But we have learned from the lessons of the athletic field that team play is possible while at the same time developing individual initiative and modern warfare calls for the same development.

For instance, here is another answer that deals with the same situation:

"The only thing that I can say is that a man in the Army does too many things by order. I wait too much for orders that do not come. In other words, a soldier does not use his mind enough and hasn't the chance. He loses his initiative."

Many officers give their men more thinking to do. These for the most part are men who have had experience in sport and who realize that it keeps men alert to make them think,—that more knowledge of the situation and what is needed—or what is to be accomplished increases the probability of bringing off a successful engagement. How far

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this can be carried is a question of the particular conditions surrounding the force, but it is surely one of the developments that has been brought out with emphasis in this last great war through which we have passed.

Here is one already commented upon:

"The one repeated constructive criticism was in regard to the fit of the collars—the men wanted looser collars for comfort, particularly on the march."

REBUILDING HUMAN BEINGS

We had great success in our reconstruction camp at Cooperstown, for here we found also in the problem of physical reconstruction that there are many phases but there are a few cardinal principles which govern, namely, that an attempt should be made to bring back normality in circulation and muscular reaction, that one of the prime necessities of recovery is a desire on the part of the patient to recover, and that there must be a condition of hopefulness induced in his mind, and that this is generally followed by a condition of ambition. It is, therefore, essential that these men have recreation adjusted to their capacities and

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exercise which will in no way tire them or produce a lower condition of vitality but will stimulate the circulation moderately and bring about a normal condition of not only the voluntary but involuntary muscles. We also find that patients react upon each other. That there is a great deal in the force of example. That the attention can be fixed on certain objects which divert the patient's mind and prevent brooding over his condition. That is a habit of mind and body which shall be the basis for the upbuilding of a wholesome as well as hopeful progress.

The two phases of athletics and recreation, and in the term "athletics" we cover all calisthenic work, have not in the past been considered as scientific branches of medicine. But this war has shown us that in camp, cantonment and station, in all training and preparation, and finally, just behind the lines and even up almost to the front, these are elements of the very greatest importance. It is through these that the morale of troops can be maintained and we are already finding that it is through these that the convalescent may be far more rapidly brought back to health.

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and returned as a useful member of his community.

But, after all, it requires a strong and wise as well as agreeable personality on the part of those who have control of these phases of convalescent work. When one thinks of the immense amount of recreation and entertainment from reading, story telling, play acting, singing, up to debating and the higher forms of indoor games, such as chess and cards, the scope is enormous and in order to provide all kinds we go back even to the old days of open fire and ghost stories down to the modern movie. But, as we have discovered from turning the ordinary office man out into a training camp and giving him fresh air and exercise, our modern life and our indoor life is not the best builder-up. We found these young men of ours, hollow-chested and stoop-shouldered, within three months standing up with a good healthy chest and an appetite that put to scorn anything that they had enjoyed formerly, and for the most part putting on weight in the form of good solid muscle. Now if that is what happened with the average fairly healthy boy, how much more do we need the outdoor, sunshine and

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exercise in the case of the convalescent who must be brought from a far lower pitch up to standard again? When we come to the outdoor activities, we begin with simple, old-fashioned things, like "Follow the Leader," and then work up into the more highly organized baseball. We began with tramping through the woods, almost playing Indian again, and coming up to topography, and through woodsman's craft, to map making. We teach over again the boys camping out, building fires, fishing if possible; where the facilities admit, rowing, canoeing, and then on the field, games such as were played in the stations during the training period, all the old games like duck on the rock, quoits, hockey, basketball, handball, tennis and cricket.

OPINIONS OF THREE PROMINENT MEN ON FOOTBALL

And now just a word about the use of the sport of football and its possible casualties. Here are some interesting letters from my files from three men whose prominence now, twenty-five years later, shows how our football men come to the front.

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These three men, Henry W. Thornton, who had charge of the English railway lines, Charles M. Wharton, who was captain in the aviation and is to take charge of the outdoor field sports at Pennsylvania next year, and Rodman Wanamaker, whose work in connection with the police force in New York is well known, make a trio of stars of which football and this country can now be proud.

Philadelphia, April 19, 1894.

In my experience, which has extended over a considerable time at school and college, I have never known any one to be permanently injured in playing football. By "permanently injured" I mean injuries of such a nature as to affect the after health or ability to move about freely in after life. I believe that the fatal injuries which have appeared in the columns of the daily papers are due to the fact that those who were injured were improperly clad, in poor physical condition (such as would render it dangerous to engage in any sport), or careless as to their playing. I am further of the opinion that much harm has been done the game, by reporters, ignorant of the game, who misconstrue pushing and shoving into the so-called slugging.

I am

Very sincerely yours,

HENRY W. THORNTON.

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Philadelphia, 1893.

I have been playing football for two years, and never was hurt to amount to anything and think that the training and the work have done me a lot of good. Football as it is played to-day is good enough for me.

Yours,

CHARLES M. WHARTON.

Philadelphia, March 31, 1894.

I consider, from a physical standpoint, that I have very much to be thankful for for the benefits received through training for and playing football.

I knew little or nothing about the game until my freshman year in college, and, by accident, one day found myself in the midst of a "scrub," from which time I continued to take an active interest in the game and it proved to be of great and lasting benefit to me. I always feel thoroughly enthused over the game and believe it will always be esteemed a most manly sport.

Yours very truly,

RODMAN WANAMAKER.

ATHLETICS BY PROXY

Outing, published in 1911, had the following paragraph (which, by the way, has no personal bearing, as other educators were struggling for the same goal) :

There is a new idea in college athletics which is spreading through the country, and Walter Camp is

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its impelling force. This idea is of amazing simplicity, yet of far-reaching import—that the man with an untrained body is only half educated. The corollary of this is training for everybody as against training for the team.

Every now and then, we seem to plunge into the waters of Lethe and forget in a moment of public hysteria the things this persistent old world accomplished in its very slow but methodical progress. The American way—and perhaps it is somewhat unfair to call it the American way, for it is the way of the mob everywhere; however, in this instance we will call it the American way—is to be seized with a sudden enthusiasm, the crowd gathering impetus as it runs and adding to its numbers, and unfortunately at the same time losing everything like restraint and adherence to fact, until there is a tremendous outcry, and no cautious voice can possibly be heard above the din. Then suddenly, having accomplished somewhat of its purpose, the crowd disperses, the whole thing is forgotten, and before long we have drifted into the old methods with perhaps upon some occasions just enough result in the way of advancement to show that the matter had been considered.

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The politician to-day who wishes to be successful has only to go on the platform and promise his constituents that he will reduce the cost of living and increase wages. A man to make a popular furor in the athletic world has only to say that modern athletics are all wrong and that he proposes to have every one an athlete instead of only the eleven men on a team. If one gets in front of the politician and modestly suggests that it is a difficult thing to reduce the cost of living and increase wages at the same time, he is howled down by an indignant multitude. If any one says that in modern athletics it is difficult to make the sedentary student an athlete and the athlete a sedentary student, and requests a formula for accomplishing this, he is regarded as a captious critic. In a crowd of this kind, when they are listening to the statements of the speaker who is showing how excellent it is going to be for the world when there are no teams or nines but multitudes running hither and thither in athletic sports, when the bleachers, bowls and stadiums shall all be razed to the ground, when there shall be no spectator but only the contestant, any chairman of an athletic commit-

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tee who should mildly suggest that this thing is a difficult accomplishment would at once be ordered home to "Do it!" and told that it was his business to "See that it was done!"

HOW CAN WE DO IT

The more men that we can get into good organized athletics the better. The question is solely how to do it, how increase that number. Intercollegiate athletics help very much and there is little doubt in the minds of many but that all forms of carefully organized highly skilled athletic competition attract the rank and file who first see these contests as spectators and then endeavor to imitate the skillful ones, and thus embark upon a career of athletics of their own. The most vital thing of all is probably playing space, and this applies to the university, the college, the school, the city and even the village. One practically never sees a well-kept baseball diamond or a tennis court or a golf course that is not used to its limit in the time when the majority of men and boys can play, namely, half holidays, or at college the hours from 2 to 4. If we added more fields and more courts and more courses, if we had

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more boats on the river, more diamonds and more gridirons on the fields, we should get an increased proportion of men playing. Do any of these men who think it is purely by an edict of the faculty or the athletic committee that those who are sitting on the bleachers shall be made to go down upon the gridiron and play, stop to think of the enormous cost that would be at once entailed if they accomplished their purpose? If there were 3,000 men in the university and they all wished to play golf to-morrow afternoon, it would take no less than ten first-class golf courses to accommodate them. If they wished to play tennis it would take courts bigger than the entire university properties. If they wished to play football, it would take a good many hundred acres, and the same would be true of baseball. The first question, therefore, in turning the bleacherites into players is room. Most boys of that age would be delighted to play five days in the week and see the pick and flower of their own crowd in a special contest with outside opponents on Saturday. The solution of the problem, therefore, begins with playing surface, leads us

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through the stimulus of intercollegiate contests or inter-city contests, and finally lands us in a position where we realize that, like every millennium, this millennium cannot come at once. An investigation, however, of the progress of the last five years shows that we are approaching more nearly the desired result, that probably at least 50 per cent of men in the universities are in some definite form of organized athletics.

If we can get more courts, diamonds, grid-irons, boats and general equipment we can reduce appreciably the number who have to go without exercise, or rather pleasurable sport, and we can spread the benefits more widely throughout all the classes.

To show that this article produced a strong effect, here is a copy of only one of numerous letters received at the time:

Dear Mr. Camp: Your article, "The New Conception of Athletics," was read in the Faculty Club last night, and I am sure from the discussion which followed that it will result in great good here. I desire this privilege of congratulating you on it. We are going to start some work on your suggestions in football just as soon as we can get on the grounds.

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STRAIGHT TALK ON MORE FIELD ROOM

The editor of the *Pennsylvania Gazette*, the official weekly organ of the University of Pennsylvania, is, I am glad to say, taking up the very question that has been raised so many times but which is now most pertinent. He says that Penn's student body is being importuned by the coaches and athletic authorities to turn out in greater numbers for the various athletic teams. In that case, as he observes, the athletic and University authorities have a job to perform before these ideals can be realized. The first is to furnish enough acreage or field room for recreation purposes, and the second is to so arrange the University roster as to furnish daylight times for such a possibility. He goes on to show that Franklin Field contains less than five acres of ground for the use of five thousand students and makes the flat statement that it is virtually impossible for more than one hundred men to take their athletic recreation on this field at one time. He says that the inevitable conclusion is that the great majority of students could not avail themselves

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of the instruction of the coaches, even if they wished to do so.

He thus puts it squarely up to the University authorities to provide more field room and to arrange a schedule so that this millennium of "everybody in athletics" may be brought more nearly home. As he says, certainly it can never be realized so long as neither the room nor the hours for increased participation in athletics are furnished.

MORE MONEY FOR ATHLETICS

It would be a bold financier who would undertake to bring about all the promised revolutions in college athletics, for the financial rock seems ever to stand in midstream of the course. A Harvard Senior offers the simple solution that the athletic system be turned over to the University and the financing be undertaken by the University authorities instead of by allied athletic organization. He states that in order to get many men out their equipment must be paid for and that the Athletic Association cannot undertake this financial responsibility. He indicates that a great many men would, if thus provided with equipment, go in for all the sports. And here

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we reach once more the problem—"What would the average University with three or four thousand men do for field room even if they equipped all these men with uniforms, with balls and bats and other paraphernalia when that crowd descended upon the fields and looked for two hundred diamonds upon which to play their games?" Truly it is indeed a difficult problem and University treasurers might well tremble if they are to provide the funds and accept the financial responsibility.

EFFECT OF WAR

Those people who did not come into close contact with our boys who went into the service, whether on land or sea or air, have most lamentably failed to gather anything of the spirit of these heroes of ours. These unenlightened ones are still back in the pre-war days. And worst of all, they have not the least conception of the state of mind of these thousands of youths who are now coming out of service and returning to the every day world. This country ought to know, and probably the majority of people in it do know, that the safety and property and comfort of the United States depended upon

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whether its boys from 21 to 31 could and would fight. How is it that these boys themselves who bore the brunt of it do not know the same thing?

THESE BOYS NO LONGER CHILDREN

In other words, they have had condensed into a year or two an overwhelming experience of realities. You can no longer talk to those men as if they were children. You can not parade your years of ordinary life before them as you could before as a guide to all their actions. They recognize, even more than they did before, constituted authority. They have lived under it where disobedience meant far more than in civil life. But that authority was definite, was quick to act, was exercised for a precise and recognized purpose and it brought immediate results. In fact it was the exact antithesis of long-drawn out academic discussions. Perhaps there is no phrase more familiar to these boys and one more expressive of discipline than "Snap into it!" If I have succeeded in presenting the picture as it really is, the reader can easily see why, when these boys come home, they want action. When the collegian comes

back for that final year or so that he regards as coming to him in his sports and games, the chance to make his letter, he is eager to plunge into the old life again, to revel in it, to enjoy it to the full. He wants to meet his old rivals on gridiron, diamond, track and river. There is a very clever cartoon of a group of soldiers waiting demobilization, under which is the legend—"Now then, you snap into it!" Lieut. Lovely has been detailed to take the dépôt brigade out on the parade ground to play games—to keep up the morale while the final papers are being signed at headquarters. There is no telling when they will be ready to sign. In the meantime Lieut. Lovely, never very good at games, has started the men on "Drop the Handkerchief." Some one in the crowd has just suggested a game of "Post Office"! The expression of utter disgust on the faces of all the men is killing. In that cartoon the artist has told the whole story, past and present. These men who, when in the thick of the fighting brought out for a brief rest, would play any silly game that diverted their minds, have no more use for these things now that they are out of it than would a

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college crowd have to see a big football game stopped between halves while the players indulged in a contest at marbles. There are a few of the mass games used while in service that may be useful later but there are none that will ever take the place of the old standard organized sports of school and university.

GET BUSY AND PLAY BALL

Speed is what we need in getting back to all our athletic sports in civilian life, whether at the colleges or outside. It has been amply demonstrated that without this training in discipline and the fighting spirit we should never have been able to play our part in the world war. Athletics in Camp and Station have engaged more men than we ever had in the colleges and clubs. It is through these agencies that thousands of men who never before had the great opportunity of organized sport were enabled to enjoy what should from now on be the birthright of every American boy. Hence before these lessons are forgotten we should hasten not only to reëstablish the sports in school and college but also to spread them more broadly through the nation.

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The boy born with a silver spoon in his mouth, who will be sent to a private preparatory school and later to college, will pretty certainly get the same fine training and discipline in this way that his predecessors had. But this advantage must now be extended to boys who are not thus fortunately situated financially. If we fail in this we shall lose the best lesson this nation ever had. But with all speed put on to establish such a desirable end we must not take the wrong turning. We must not lose our way. We have splendid ideals. We have the benefit of experience. We have the pathway well-blazed before us. But we are a mercurial people. We have a great flash of enthusiasm and when that is on we go in one direction with such force that we stampede every one and woe betide the quiet thinker who tries to keep his feet and look ahead in that wild mêlée. He is swept down and trampled under foot ruthlessly and without a qualm. "He stood in the way of progress," the crowd shouts, and moves on. But when the spasm is over the crowd begins to slow down; yes, sometimes they begin to come straggling back, having failed to find the promised rain-

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bow at the end of the path. We have seen all this a dozen times but it has not had any dampening effect or rather any enlightening effect upon us. There was a time when in a mad stampede of this kind the colleges went wild on the subject of a large intercollegiate Regatta and Saratoga was the scene. Something like thirteen colleges made the long journey and encamped there. But that great Hegira brought its own penalty, for it speedily disintegrated. We had a big Intercollegiate Baseball League at one time, though never as large in numbers as was this Rowing Carnival. But that Baseball League also fell apart. Then we went as far in the other direction. Dual games, dual contests were the favorites of the hour. We were told that these large aggregations were hotbeds of college politics. In fact the Intercollegiate A. A. A. A. is about the only large association that has survived, and Track and Field games lend themselves naturally to a large number of entries. There have been heartburnings and accusations, happily fairly well controlled, even in the I. C. A. A. A. A. But the point is this, that where we have tried in an outburst of enthusiasm to organize great un-

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wieldy associations, they have almost always broken down of their own weight and nothing has been gained. In fact, when the old Intercollegiate Regatta broke down, a number of the colleges went out of rowing for good. Every college should support all the athletics possible and practical to that institution but should not be driven into taking on some form of sport for which its environment and conditions are manifestly unfavorable. The same is true of industrial plants and communities.

PAY WHETHER YOU PLAY OR NOT

What would the college faculty of even a decade ago think of the pace we are now going in our athletics? It was once the fashion to frown upon athletic sports, to doubt the studious intention in the classroom of the man who frequented the athletic field. And now the Trustees of some of the Universities have determined to assess every student of the University for the support of athletics! He can play if he likes but he must pay for the play anyway. And why should this not be done? It is only following a custom practiced for some time in many schools. If as-

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sessments will make more men go out for athletics so as to get their money's worth, the end will probably justify the means. But best of all it shows that our college authorities are at last fully alive to the fact that athletic sports are an important part of college life in the molding of character and the building up of health and as such deserve the most serious consideration as a real part of the curriculum. Still there are some good fighters left on the other side and we shall hear from them yet. The President of the Board of Education in the city of Philadelphia reports adversely on Military Training. He says: "Uniforms, brass bands, guns, etc., although very attractive and appealing to the eye and ear as well as to youthful imagination, are apt to take too much time and attention from the more serious work of the school and they have no physical value." Further on in his report he suggests the abolition of competitive games. "Interscholastic competitive games may well be dispensed with as neither necessary nor desirable." This President should read Charles P. Sawyer's words, in which that veteran follower of sports states broadly that

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this element of competition is the most "worth while" feature of our sports. Well—"so many men, so many minds," but it might as well be recognized by those who desire to accomplish results with the youth of the land that exercise for the sake of exercise is not part of their life—that this phase never develops in the youthful mind and no matter what may be the well-intentioned attempts of the elders along this line they must inevitably fail unless pleasure and sport and competition of a keen kind enters into the question.

Youth is combative, not compromising. Youth is full of the joy of living, delirious at times with it. Youth is illogical, inconsistent. Youth is extravagant, wasteful of time and money. Youth is full of half understood desires that drive him on. Youth is impatient—what he wants he wants now and he will get it if he can. When he has it he is ready for something else. He is inconstant and unstable, but youth will have its fling in spite of all the laws of Age grown gray and wise and weary of struggle. Remember no time or age has ever succeeded in taming youth or putting it under the yoke. No body of Patriarchs has ever been able to impose their

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maximum of caution and minimum of courage upon that ambitious rushing host of boyhood which, like a great wave, sweeps them out of its pathway.

DON'T UNDERVALUE COMPETITIVE SPORT

Once again, have we already forgotten those boys of ours who rushed to the call of the colors the moment the country needed them? It would certainly seem so in all this welter of words used as an argument for the physical improvement of our people. The cause is a grand one but the methods that are being used by some of its supposed friends are doing it far more harm than good and will most surely prove in the end the worst kind of a boomerang. We know certain things now for incontrovertible facts and any man who tries to deceive the public about these facts will never succeed in securing the support of that public no matter how worthy may be his motives. The first of these facts is that our athletic sports proved highly valuable to us in this great emergency. The testimony as to this is so voluminous and comes from so many of the highest sources that no

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one may venture to dispute it. It has become a part and parcel of our military preparedness, is recognized by our Allies as the one great advantage we had which enabled us to make up for our general lack in technical detail at the beginning. So our country and our people are impatient to have more rather than less of it, to distribute it more widely and to keep competitive sport as an asset of the nation.

MORE AND MORE ATHLETICS

At the very time when our reports were full of the names of our former college athletes who were doing their duty at the front, many of them performing deeds of the greatest heroism and some even making the supreme sacrifice, certain of these opponents were still back in the haze of the old trivialities and publishing diatribes against the interference of sport with the work of the college. The old foundation of the very beginning of colleges in these United States was stated to be "to breed up hopeful youths in the service of the state." And when the supreme moment came we found that even if the old tenets of Greek and Latin had given

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way, the foundation still held good and the youths we had been bringing up were ready for the service of the state.

Here are some of the criticisms cast upon these sports:

"A good deal of the professional training of athletic teams has been grossly objectionable in overworking boys whose primary obligation is to the academic aims of the college."

"I do not believe there is any obligation on the part of the college to furnish substitutes for the circus, the prizefight and the gladiatorial combat."

"Distorting its primary functions in the public eye and poisoning much of its inner life."

"Athletic associations, hired coaches, sporting alumni, often barred by alumni associations, together with all the agencies that batten off the public spectator have set the pace."

"Exploited by the vulgarities and puerilities of the sporting editor of the metropolitan press."

"College work and all things intellectual go into the discard as negligible values."

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Now if we could have forgotten our Roosevelts, our Leonard Woods, our Peyton Marches, our Vance McCormicks, if we had failed with our Poes, Thayers, Dibbles, our Wrenns, Adees and Cochrans, our Sturtevents, Winters and Bakers, we might have overturned our entire system of college athletics, thrown it into discard, made new plans wherein boys should not strive too hard in physical contests, closed our gates to the public and stopped poisoning the inner life of the boy. But the great body of thinking men in this country did not believe this; they saw these boys coming out wholesome, sane and strong, they saw them leading in the very front of the work in the line, the camp and behind the lines. And they were more than ever convinced that we were breeding hopeful youths in the service of the state. And that is the reason why we shall not see this throwing out of our athletic program neck and crop as a menace to our institutions and why, when we are settling down again, we do not find that we have lost football or baseball or any of our athletics. That we are not closing the Stadiums and the Bowls, that we are still "hiring" men to coach, train and im-

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prove the technique of these boys in their sports, and finally, that instead of abandoning these highly competitive and engrossing athletics we are even multiplying them. In fact we shall see more field room devoted to these ends, we shall see more boys forgetting for an hour or so a day their books to plunge into these contests. We shall see this same "mania" if you choose to call it so, extended throughout the community, to industrial plants and clubs. We shall not see the metropolitan press abandon its sporting pages, we shall not see the omission of all names of the heroes of these contests, but we shall see more. We shall see athletic fields given as memorials of our boys who fell. Instead of Harvard alone having a Soldier's Field many communities will have them, and the boys who come home and the boys who come in the next generation will have more and more rather than less and less athletic sports.

A SAVING SENSE OF HUMOR

To any one who is strongly interested in the welfare of college athletics, a saving sense of humor is almost a necessity. Not that this should detract in any way from a sound judg-

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ment in matters involving principles, but it will save him many times from an excited jumping at conclusions, which a long-time experience shows are unwarranted.

Some few months before the present war opened in Europe, an article was published in one of our leading periodicals taking up the matters involved in college athletics in an extremely serious fashion and criticizing very severely some of the ethics of college sport. Yet after rehearsing many of the evils, the author was prompted to make the following statements:

“Among boys to-day athletics is the only systematic training for the sterner life, the only organized ‘Moral equivalent of war.’ As every good schoolmaster knows, there is no other substitute for the ancient austerities.

“In these days of increasing luxuries, ease and softness, the influence of wholesome athletics in developing character and toughening the moral fiber is not to be ignored. Many a weakling is made strong through the lessons he has mastered on the football field. Here are taught and developed self-control and self-surrender, alertness of mind and body,

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courage and the ability to think and act quickly for one's self.

"The meaning of 'Democracy' in its best sense is here driven home with compelling force. Self-restraint is in the very air and self-denial for the benefit of all a daily necessity. And the influence of these lessons is not lost on the student body as a whole. It permeates the very atmosphere of the school community, restraining the weak, inspiring cleaner standards of life, and lifting to distinctly higher levels the student conception of physical fitness and moral worth."

THE PSYCHOLOGY OF IT

I shall probably offend some of my good golf friends when I say that for these very reasons golf is not as good a character builder for the rough-and-tumble of the world's affairs as is baseball or football or some of the other team games, where a player must steel himself to the conditions and be able to perform his work even though a howling throng are roaring or though his opponents are quite ready to seize upon the least sign of "rattle" in his performance. A boy is better rounded out for his after life if he

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has some of the bitter with the sweet, and if he can adapt himself to varying conditions.

ATHLETICS NOT HURT BY PUBLICITY

The American people were complaining that there is not enough publicity given to the doings at the Peace Conference—that nothing but generalities emanated from Paris, while the same reports from Paris found fault with the use made of data by the American reporters to bluff and bulldoze. Altogether, this matter of publicity seems to be the most debatable of our generation. Some of the college authorities have lately laid at the door of the Press all the ills that may be found in college athletics. They speak of the Sporting Editor as a man who is always a baneful influence. They object strenuously to the detail in which the qualities of the players are described and the magnifying of the prowess of these heroes of the campus. And yet with it all there seems to be no definite lines drawn by which one may distinguish between good publicity and bad publicity. One is tempted sometimes to analyze this matter of publicity to which objection

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seems to be raised every now and then.

Have any great numbers of our prominent athletes gone to the dogs because of "swelled heads" coming from the publicity given to athletes? Indeed not. Thousands of them go out into the world yearly, begin at the very bottom with no element of false pride and make their way rapidly to positions of prominence in the professional and industrial communities. Instead of college athletics and the publicity given to them, making the athlete less willing to start at the bottom, the reverse has proven true. The very discipline he has learned in school and college of being obliged to start on the "scrub" team and work his way up stands him in good stead when he starts in the larger field for his life's work. In fact, the closer touch with the public is oftentimes a distinct advantage possessed by him over the recluse. If this were not true and if our athletes had been spoiled by the publicity accorded their prowess, we should find that discerning older men instead of looking for these boys would be refusing to accept them, for successful professional men and successful business men are not guided in their selection by sentiment. So

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we have plenty of backing for the publicity given to athletics in ordinary humdrum life. When it comes to times of great emergency like the one we have just passed through, the condition is even more marked. We did not find the slacker among the so-called spoiled athletes. On the contrary, they rushed almost *en masse* to the colors. Many went into the war on the side of the Allies even before the United States was involved, and as soon as we declared war all the rest went almost as one man. And more than that, they were looking for the posts of danger—the real fighting. The swivel-chair jobs were not the ones they were after. And whether in the ranks or as officers they made good. Surely there is nothing in all this that should justify a belief that such publicity as has been showered upon the athlete in the past has spoiled him. And he can be trusted to maintain his equilibrium in the future as well, even if he does appear as a hero upon the sporting pages.

FAIR PLAY HELPED BY PUBLICITY

Suppose as an *abductio ad absurdum* we go to the course advocated by some. We shut

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the public out, we admit only the graduate and undergraduate to these games. There is very grave doubt as to whether under these conditions the games would be as fairly played as they are now. In fact this method would lend itself to a far greater temptation toward college quarrels because there would no longer be the great public present as an arbiter. If it has been found that publicity is the great factor in fair play in the larger world, why should it not be equally true in the college world? Now to come to the contention so frequently offered that publicity affects the collegian deleteriously because it makes him think too well of himself, and makes him believe that because he has become great in his little mimic world he will have the larger world outside at his feet when he graduates. Has this ever been proven?

COLLEGES NO LONGER SECLUDED CLOISTERS

If this is true of the great world outside the halls of learning, why should it not follow within these once secluded cloisters? As a matter of fact it does. If a college or

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school or university has good things to offer it advertises them. It advertises its courses and its advantages. It sends out catalogues of the list of its professors. It has a Press Bureau for the dissemination of the facts of interest connected with its activities and the activities of its teaching force. It most distinctly does not hide its light under a bushel. If a new Athletic Director be secured, announcement is made by the Faculty Committee or the Board of Control. The Alumni organs give his past history and his good works. If a game is to be played, notices are duly sent to the Press in order that the public may be informed and may come to the game and by their admission charges finance the athletic treasury and make the upkeep of fields and track and boat houses possible. But if the public comes to the games it naturally has a right to read about these affairs in which their interest lies. So then at last we come to the point where we must in all reason determine either to close the gates to the public, refuse to sell admission and support our college athletics solely from subscription, or else allow them, the public, to read such descriptions as shall be judged by them and

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by the purveyors of information as matters of interest as news.

PUBLICITY THE KEYSTONE OF MODERN LIFE

Publicity is really the keynote of modern life and he who would avoid contact with it must withdraw entirely from the current of the great tide of human endeavor and become a polyp in some back water. Publicity has been a most salutary influence in the development of our times. It has righted many a wrong and has been a strong deterrent to many of the evils that could only flourish if unknown. It is extremely difficult to distinguish the various lines of public opinion in this matter. A scientist makes some important discovery and, thanks to the newspapers and magazines, he becomes a "noted" scientist. Another man may attempt some great injustice but his work is frustrated by the influence of the press. The development of modern business is almost wholly reared upon foundations of advertising. "He who runs may read," is more true of this generation than of any that preceded it and it is probable

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that this will be even more pronounced in the generations that follow.

MARSHALL-STILLMAN CHAIN OF ATHLETIC CLUBS

One of the best signs of the times is the opening of the Marshall-Stillman Athletic Club for young men. This is the beginning of the development of an organization known as the Marshall-Stillman Plan, which is intended to establish a chain of athletic clubs in congested centers to bring young men under the influence of helpful athletic activities. The incorporators are Stuyvesant Wainwright, Winthrop Cowdin, H. R. Mallinson, Walter W. Price, and "Marshall Stillman" himself, this being the *nom de plume* of Alpheus Geer. The opening of this Harlem Branch was celebrated by a half dozen three-round boxing matches, over which Rev. Herbert Shipman, Rector of the Church of the Heavenly Rest, acted as Master of Ceremonies.

This, taken in conjunction with the development of Industrial Athletics and the promising plans of the Standard Oil Company on new industrial relationships system

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is the beginning of sound attempts to solve our industrial and young man problem. There must be something far more constructive in the bringing together of the management and the worker on common grounds. Athletics offer such a common ground, and at the same time they furnish the best health-giving propaganda that can be found.

PART V
INDUSTRIAL WORKER

V

INDUSTRIAL ATHLETICS

WHEN we step out of the realm of the schoolboy or collegian and take up the health of the youth who has less time than these favored ones because he has started on his life's work, we have another problem. We can provide for only a little daily exercise, but we can provide for holidays and days when the boy has his time to himself. This problem of industrial athletics has come very strongly to the front and is worth careful consideration.

WAVE OF INDUSTRIAL ATHLETICS SWEEPING THE COUNTRY

Industrial or plant athletics is gaining friends everywhere. It is the answer to many of the most difficult problems in industrial life. Baseball beats Bolshevism and statistics are already beginning to show that the brotherhood of athletics can be made to take the place of the association of the saloons. As an illustration of how this movement is

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spreading, there is one association alone, originating in Akron, with some forty members, including such concerns as the B. F. Goodrich Co., Goodyear Tire Co., American Sheet and Tin Plate Co., Firestone Tire and Rubber Co., Westinghouse Electric and Mfg. Co., Carnegie Steel Co., International Harvester Co., National Cash Register Co., Derwin Williams Co., General Electric Co., Willys-Overland Co., Packard Co., and the Crane Co. In several of these organizations not only have gymnasiums been provided but also field room. Detroit has just made a ten-million-dollar bond issue for a playground. A complete baseball diamond and athletic field is laid out in Gary, Indiana, for the Illinois Steel Co., containing a quarter mile track, large grandstand, and as good a baseball diamond as can be made. Ten summer camps have been established near Dayton where more than twenty thousand people can be accommodated. These are for vacation purposes. The National American Industrial Athletic Association held a big meet at Gary, Indiana, on the 4th of July for a complete athletic field and track program with the addition of several features beyond

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what are used in either the Intercollegiate or the A. A. U., for they had a nine-mile walk, horseshoe pitching and wrestling. On Memorial Day, preceding this, a meet was held with the employees of nine industrial plants competing. One very interesting phase of this is that several places have formed Industrial Twilight Leagues under the new Daylight Saving laws, and baseball games are played after the factory closes. In addition to this, as soon as the game ends there is a general "sing," while a screen is being erected in front of the backstop, and by the time the singing is over the screen is in position and movies are shown.

A great deal of attention has been paid to the noon-hour, for here is an opportunity for certain kinds of sport which do not take too much time, and are not too violent. Probably the best of these are quoit-tossing and horseshoe pitching. It is a very simple thing to lay out a ground for this almost anywhere, the National Rules requiring a distance of 40 feet between pegs and the pitcher's box, 3 feet in each direction from the steel pegs which are placed at either end. In some of the factories they not only have athletic com-

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mittees, but they have regular commissions for governing specific games. For instance, the Packard Motor Car Co. has a Boxing Commission of four members who control the shows that are held in the noon-hour, once every week, and several places, as, for instance, the Ford Plate Glass Co., of Toledo, where professional boxing shows were formerly staged, now are developing their talent there in the plant itself. The truth of the matter is that big, broad-minded men in industry have learned that running factories is something more than simply hiring and firing men, and industrial Athletic Associations are coming to the front rapidly in all communities. What we need now is more definite organization and dissemination of information as to the proper methods for organizing factory plants, and athletic leagues among them, more study on how to handle noon-hour recreations, specific and approved methods of inter-departmental competition and inter-factory leagues, definite and determined efforts to keep out the professional element, at the same time creating a spirit of factory loyalty, the development of complete recreation programs, with inter-

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city and national competition, and, finally, the full and complete education of the members themselves so that factory committees and general commissions handle all sports.

DEVELOP INDUSTRIAL SPORT IS THE CRY OF THE HOUR

The same morale and spirit that was developed throughout the service during the war, through the medium of athletics, and the spirit of coöperation that comes with these sports is needed to-day in industrial life. We shall find if we are wise, that the introduction of these on broad principles through the industrial establishments of the United States will prove one of the greatest assets that business can have.

PROBLEMS OF INDUSTRIAL LIFE TO-DAY

One of the great features in industrial life to-day is the quality of the artisans and their permanency. The labor turnover with shifting help has become the problem of the hour. The quality of work has deteriorated very much under such conditions. In fact, it was the experience of many plants that soon after

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the armistice was signed, their production costs went down rapidly, indicating that men concentrated on their work more, thought less about changing situations and more about doing good work in order to hold their positions as against the wholesale discharges that were being made on account of lack of orders. Dissatisfaction and inattention breed incompetency and incompetency lowers productivity and hurts not only the manufacturer but the entire community. We already have had reference to the great number of days lost through sickness. There is another phase to this as well, and that is the poor work done when a man may be well enough to drag himself into the factory but in such poor condition as to drag through his work and lose anything like a desire to produce a good job. A few half-ill people may seriously slow down the work of an entire group, and hence, both from the viewpoint of the manufacturer as well as the worker, humanitarian principles providing for good physical health and a brightness of horizon return profits to the artisan as well as to the employer.

There is a human desire for health and

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happiness and when that is neglected anything like the speeding up of production results in waste. The truth of the matter is that the more healthy and happy the workers, the more they will produce and that with satisfaction to themselves and that no work of this kind is a charitable work, but a cold-blooded matter of adjustment of conditions with benefit to both parties.

The big men in industry are realizing all this. They are looking for results. They will find them and the line upon which they will discover them lies along the development of industrial athletics. Here is a list of men who are studying these problems now, fifty of them who come into my mind. They are all real sportsmen and acting as an advisory committee could and would do more to study and spread industrial sport than any group of men in the country.

Charles M. Schwab
A. C. Bedford
H. L. Pratt
Chas. B. Segar
Percival S. Hill
E. W. Rice, Jr.
John Goss
Louis F. Stoddard

Henry S. Brooks
Rodman Wanamaker
John D. Rockefeller, Jr.
Samuel Mather
F. J. Wade
Coleman DuPont
Chas. W. Sherrill
Dwight Davis

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Jas. W. Wadsworth, Jr.	Franklin D. Roosevelt
Leonard Wood	Arthur Woods
A. J. Hemphill	Rabbi Wise
Grayson M. P. Murphy	George E. Vincent
Charles Sabin	Harry Payne Whitney
Frank A. Vanderlip	Thomas Hitchcock
Danvin P. Kingsley	Payne Whitney
E. T. Stotesbury	Wm. McAdoo
August Belmont	Wm. B. Wilson
Fred W. Allen	Franklin K. Lane
Walter Jennings	Thos. Cochran, Jr.
Paul Warburg	Averell Harriman
W. H. Crocker	Robert D. Wrenn
Joseph Lee	George T. Adee
Lee Hanmer	Julius Rosenwald
Chas. Crane	Palmer E. Pierce
Samuel J. Dallas	Arthur T. Cosby
Gustavus Kirby	

Sport brings sanity. Baseball beats Bolshevism. "Fans" are better than fanatics. The saloon is shut. What is the substitute? Sport is the answer.

PLOWING UNKNOWN FIELDS— FATIGUE

We have been plowing in an unknown field, as it were, in this and a number of other ways, one of which is the attempted reconstruction of our men back from the front.

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As was illustrated in the Great War, the implements of war have so changed that we have no longer from old conflicts any available data to go upon. We have learned a lot about fatigue and what it does to a man. For example, we have found in two branches of the service, the submarine work and the aviation work, that the condition of the men, laying aside all question of wounds or injuries, was of vital importance. But we were grappling with conditions that at first were entirely misunderstood. Fatigue was one of these problems. In the old days we regarded fatigue as calling loudly for physical rest, and yet when we came to experiment we found that there were varieties of fatigue induced by this new work that called for quite the opposite. In cases of submarine men returning from a week of work it seemed simply heartless to do anything with them except put them to bed. And yet we found after experimentation that these men, given a mild form of stretching exercises, not only slept better but came back within a much shortened period of time, ready for work again, when compared with those who simply tumbled out of a boat and tumbled into bed.

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We also found in aviation that the fatigue coming from flight was quite different from ordinary muscular fatigue, and that something of a similar condition prevailed in the case of these fliers as that which we had discovered in the submarine men.

INDUSTRIAL FATIGUE

Industrial fatigue is one of the great problems of modern times, for upon a study of it depends industrial efficiency. We have hardly begun to touch the surface of this. As we found in certain branches of the service that restoration from fatigue might consist in exercise of a different kind, so we shall find the same true in the problem of relieving industrial fatigue. A man or a woman must perform certain motions which constitute the essential part of the operation in which he is engaged. But many of them perform a great many more motions which become secondary sources of fatigue. As a matter of fact, Gilbreth told me when working out some golf problems for me through the use of the camera, that he had proven that in the customary way of laying bricks a man made eighteen motions in laying a single

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brick, and it was demonstrated that eleven of these eighteen motions could be cut out altogether, and some of the others combined so that the final motions required were reduced to one and three-quarters. However, this is a technical phase of the question. The one we are dealing with is how to avoid the more patent sources of fatigue, and here proper light, proper ventilation, proper environment is the main feature. Combined with this should be the study of certain relaxing exercises ¹ which will rest the muscles and nerves involved. This, taken with the proper regulation of temperature and humidity, and combined with certain rest periods, relieve much of industrial fatigue and lead to much healthier and hence happier lives in the case of thousands of our workers. We can also push the point of fatigue farther away by using the week-end holiday for proper games and recreation and the storing up of energy for the following week. This will go far also towards the elimination of many industrial accidents, for these many times come from a physiological condition. The wise men in the country realize that our production

¹ See the Daily Dozen, page 57.

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must be increased and the only way to do this is to increase industrial efficiency, and at the base of industrial efficiency stands as the main factor physical health and well-being.

ATHLETIC FIELDS THE BEST WAR MEMORIALS

Make our Memorials athletic fields, clubs and playgrounds! Get all the field room possible for city and town. If those who are planning memorials to our returning soldiers will for a moment "stop, look and listen" they may have a vision as to the appropriate form of such memorials.

If every one interested in this agitation would consider what men who actually did the fighting went through, what it was that they learned from their months of preparation and what it was towards which their thoughts turned at the periods of rest and relaxation, there would be no question as to what kind of memorials would be erected.

There is no practical value in an arch or a monolith. True, they perpetuate the memory of the occasion, but when we can combine the two and make something of distinct

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practical value and use there ought to be no question in our minds.

Here is a quotation from a speech at the Historical Society which tells the story:

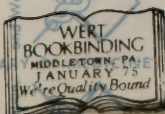
"Among some of the recommendations already made there is one which strikes me as worthy of more than passing attention—the thought that the survivors of that valiant band of patriots who bore the brunt of that assault upon the Hindenburg line, should be consulted and due deference given to their wishes in the premises. If an athletic field—a stadium of sports, emblematic of contest and breathing the spirit of Mars—appeals to them as the most agreeable and appropriate expression of the esteem and gratitude of their stay-at-home beneficiaries, let it be one worthy of the epochal occasion and the supreme sacrifice. Let it be a real Campus Martius of ample acreage, susceptible of extension, adequate for every future requirement."

Now just at this time is the moment to take up this most important of all subjects. There has never been proven wasteful a single dollar spent in developing athletic fields either for school, college or community. Almost before they are completed, for the last fifty years, these fields have proven inadequate. Remember that fifty years ago in most communities there was some vacant lot somewhere within easy reaching distance

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upon which the boys could congregate and play their games. But the advance of civilization, the crowding of buildings, has gradually cramped youth in or driven him to the streets for play. Youth must have play. We are simply throwing away all chance of the heritage of manhood if we deprive boys of that inalienable right by building houses and offices upon the land that he might have for that purpose. If we do this and do not adequately provide some other places for him, we shall certainly have only ourselves to blame for a weakened generation. Hence it should be the aim of every one who wishes to see our boys and girls grow up strong and well to seize upon this opportunity—the time of memorials to the brave boys who fell fighting for their country—to insist that such memorials should take on this most appropriate form. If we do this we shall build for the future with the greatest practical sagacity.





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